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Editorials

ARETAEUS THE CAPPADOCIAN

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Aretaeus

IT MAKES no difference how good a certain seed may be, it will not grow unless it falls upon fertile soil. After Hippocrates sowed his immortal teachings, there seems to have been no suitable intellectual soil in Greece for five or six centuries, until Aretaeus, the Cappadocian, came to his maturity. In his mind the seed struck root and bore a good harvest.

It seems as surprising as it is deplorable that so little is known regarding one of the greatest of the early European disciples of the Father of Medicine. Even the date of his birth cannot be placed within a hundred years, and the pictures of him are based upon tradition and imagination. It is known that he was a native of Cappadocia and lived and worked in the second or third century A.D. Because neither mentioned the other, some believe that he was contemporary with Galen. It is fairly certain that he spent some time in Egypt, and it seems probable that he also lived in Italy. Of the seven books in which he embodied the results of his clinical studies, only fragments remain—but such fragments!

It is the consensus that Aretaeus came nearer than any other Greek to the spirit and method of Hippocrates, and no one exceeded him in the straightforward and vivid portrayal of disease. In addition to being a close and open-minded observer of what transpired before him, he was a literary stylist, the perfection of whose Ionic Greek is still greatly admired by scholars, and whose works may be read (in translation) with keen enjoyment, even today.

Aretaeus seems to have been a victim of few of the superstitions and weird ideas which were common in his time; although he did half believe that the uterus was an independent animal, living in a woman's pelvis, and described the organ on that basis, as well as declaring that in diabetes the flesh melts down into urine.

His descriptions of consumption, pneumonia, pleurisy with empyema, diabetes, tetanus, migraine, jaundice. leukorrhea, angina, elephantiasis, diphtheria and the aura in epilepsy are as clear and characteristic today as ever they were, although he knew nothing of bacteriology or blood-sugar tests. He also gave the first clear account of the difference between cerebral and spinal paralysis and of the basic varieties of insanity. So far as we know, he was the first of the ancient writers to auscultate the heart and to recognize that murmurs are a regular feature of advanced heart disease.

That he was a keen observer of human

psychologic reactions is proved by his statement, "If you give a medicine at the height of the dyspnea or when death is at hand, you may be blamed for the patient's death, by the vulgar"; and the depth of his sympathy was shown when he said, "When he can render no further aid, the physician can still mourn, as a man, with his incurable patient."

Neuberger, Garrison and Robinson agree that he was the outstanding physician of his time and one of the few medical men of the ancient period whose works can still be read with enjoyment, as well as profit; and Robinson declares that there was none who could repeat the Hippocratic Oath with more sincerity and propriety. For all of these reasons, his name should be preserved and his memory kept green by the medical men of all times.

Few are far enough advanced to accept a fact as it stands, unprompted by prejudice, superstition, selfishness and self-conceit.—PROF. NICHOLAS ROERICH.

REPRESSSION AND CONTROL

TWO shocked spinsters of the vintage of the middle eighties were discussing the "younger generation." With bated breath the first declared, "Why the young people of today talk about positively *anything*." "But the trouble is, my dear," sighed the other, "they don't talk about anything *else*."

If Sigmund Freud had propounded his remarkable hypothesis, that sex repression is the cause of practically everything that ails us, fifty years ago, the fame of his alleged discovery would have been confined to the medical profession (because lay persons did not then discuss such matters) and would soon have been smothered with a good, substantial blanket of common sense and general observation. As it was, he tossed it to a generation which was popularizing Elizabethan freedom of speech and looking for alibis for doing as it jolly well pleased—and they leaped for it like a hungry dog after a bone.

Even serious and well-intentioned youngsters will come to physicians saying, "Doctor, I feel that I *must* give my urges free play, for otherwise, so the books say, I will develop repressions which will poison my life." We must be prepared to meet such an emergency in a sound and logical way, or we will fail in one of our most important duties.

In the first place we must understand that repressions come only from emotions of such a nature that our training and environment stigmatizes them as too grossly wicked to think about—like incest and murder. We thereupon refuse to look them in the face and we crowd them down below the level of consciousness, from which limbo they can escape only in symbolic form. As long as we can look at a desire directly and consider it, it is not repressed.

The urge to murder, rob and commit incest is extremely rare among persons of any reasonable degree of spiritual development and need scarcely be considered in the case of normal persons. The two matters which the lay version of Freud's pronouncements is generally stretched to cover are getting drunk and satisfying the sex appetite, neither of which is, today, too horrid a picture for the adolescent mind to contemplate with equanimity.

So long as men live in communities which are to any extent civilized, it is impracticable for every individual to do exactly what he is inclined to do, from moment to passing moment. Such a line of activity would interfere with the peace, happiness or even the lives of too many others to make that type of conduct tolerable. As society is now constituted, jungle ethics are out of date, and every person must exercise such a degree of restraint upon his primitive desires as will render our present way of life possible and practicable. This is not repression (a subconscious process), but conscious and purposeful *control*, which is as salutary as the other thing is noxious.

So long as we can think about an idea or a line of conduct directly, and subject it to the operation of reason, that idea is not repressed, even though we may control, with an iron will, the actions to which it might lead. That sort of thing puts spine into one's back and sinews into one's character and we need a great deal more of it.

As a matter of fact, except in persons whose upbringing has been of a decidedly unusual type or those who are actually suffering from psychic disorders, we need scarcely give thought to repressions at all. The younger people are in far greater danger from an excess of "self expression" than they are from frustrated and suppressed emotions.

It would be a good idea for every physician to inform himself and think this matter out, along the lines just sketched, so that he can marshall his arguments logically and convincingly when he is appealed to for helpful suggestions in a matter which may well prove to be of vital importance.

Continence and chastity are not the same thing. Chastity is the sanity of sex.—JUDGE BEN B. LINDSEY.

MORE VITAMIN A

HITHERTO, the chief reliable source of vitamin A—the substance which increases the body's resistance to infective diseases—has been the time-honored, but never popular cod-liver oil. This medicament has been employed, empirically but with success, for many years, and only recently have we found out just why it is so useful in respiratory diseases of bacterial origin.

But, in spite of its great value in medical treatment and prophylaxis, many persons have been unable or unwilling to take it, because of its unpleasant taste and odor and the relatively large size of the effective dose.

Announcement has been made very recently of the discovery of another source of vitamin A in much higher concentration than in cod-liver oil. This is the liver of the halibut, a highly-esteemed deep-sea food fish. This oil, now available commercially as haliver oil, is probably no more palatable than that from cod livers, but it is so much more potent that the dose is reduced to a few drops, instead of a tablespoonful, and may even be inclosed in a gelatin capsule, so that it has no taste whatever.

In order to make this new remedy as useful as possible, its vitamin D content is reenforced with viosterol to bring it up to the official standard of "250 D."

Now that it is possible to supply practically all adults and children with an adequate amount of vitamins A and D, without arousing their repugnance or causing distress, it seems certain that physicians will be eager to avail themselves of these valuable protective and curative substances.

In exact ratio to the obstacles which a man overcomes at the outset will be the measure of his success.—WILL LEVINGTON COMFORT.

CONTRACEPTION AND THE PHYSICIAN

WHETHER we like it or not, and without regard to what we may think of the ethical, sociologic, physiologic, economic and other aspects of the matter, contraception is here to stay, has been here for a long time, among certain groups of the world's population, and is destined to become an increasingly important factor in the calculations of all who are practically interested in the promotion and conservation of human welfare.

In this latter class, the physician has always (and very properly) been prominent. It is to him that people have always looked for helpful advice as to the maintenance of their physical and psychic health; and when (as, unfortunately, sometimes happens) he has failed them, through ignorance or prejudice or both, we have little to say if they turn to quacks and charlatans, in the hope of receiving the help which their family doctor cannot or will not give them.

Whatever may have been the conditions

a century ago, when enormous families were common, the times have now changed. The economic and social pressures of these days make the regulation and proper spacing of children a necessity, if any reasonable degree of happiness in living is to be secured; and the promiscuous fecundity of the underprivileged and inefficient classes constitutes one of the most serious dangers our civilization has to face.

Those who fear that a general knowledge of contraceptive methods will lead to the extinction of the race, overlook the fact that the maternal instinct is as universal and potent as is the sex instinct. The sterility clinics, where such have been established, are as eagerly attended as are the birth control clinics.

Those who sincerely (not platitudinously) fear its effect upon adolescents, need only give thought to the fact that among the chief patrons of the bootleggers of alcoholic beverages, today, are the very young people who, twenty years ago, never thought of seeking such relaxations. Moreover, these same young people already know more about contraceptive measures than do their parents.

Since, then, the development and extension of birth control appear to be inevitable and necessary, it seems rather ridiculous, or worse, for the medical profession of the United States to turn its back upon the constructive and valuable work which is being done along this line and shriek "Unclean!" The people are *going to have this information, somehow,* and if we are seriously interested that its dissemination shall be accomplished in a rational, dignified and ethical manner, it is high time (if not already a bit late) that we found out what it is all about and began to assert our perfectly natural leadership in that field; otherwise unreliable, erroneous and, perhaps, pernicious information (or misinformation) will be bootlegged to those who need and want it, by men who are more eager to line their pockets than to help mankind. We have seen what happens when a reasonable and natural human desire is forbidden satisfaction by law!

Laboratory and clinical research has now demonstrated that there are measures which, in the hands of reasonably intelligent and civilized persons, are far more reliable in preventing conception than are most of the therapeutic resources we are using every day—in fact, failures are so rare as to arouse a doubt that instructions were faithfully carried out. Detailed information on these points is now available to any physician.

The pressing need, at the moment, is the removal of the medieval taboos which now prevent the dissemination of this knowledge regarding the newest of biologic inventions, so that the indications and technic of its application may be freely and properly taught in our medical schools and discussed in our professional meetings, and that responsible birth control clinics, conducted by reputable physicians, may be established in all of our larger hospitals.

A movement is under way at present to remove the ignorantly-conceived restrictions which now hamper medical men in the performance of one of their important duties to their patients. It is no more intended or desired to force birth control upon anyone who considers it morally wrong or socially inexpedient, than it is to force loans upon unwilling persons when money is made available, in the banks, to those who want and need it.

Those who feel that, as physicians, they should do their part in removing from our statute books laws which are musty relics of a bygone time and state of society, and take their places as the rightful leaders in and controllers of an inescapable movement of our times, would do well to communicate with the Committee on Federal Legislation for Birth Control, 17 West 16th Street, New York City, and lend their support to the program for legislative reform which is now being developed.

When the right idea penetrated enough heads, horse thieves became history.—Robt. Quillen.

Methods of the Nostrum Vendors

SOME people seem to think that a "nostrum" must be some kind of a potion for misguided or ignorant people to drink, and, indeed, that was formerly true. Moreover, the word itself (a Latin word, meaning "ours") and the things of which it is a symbol, carried no invidious significance in the early days of this country, when private home-remedies ("ours"), which had proved successful, were passed on to the neighbors.

Then came the period when men began to manufacture these compounds on a large scale and market them, by lurid methods, gradually developing the immense and pernicious "patent medicine" industry, which, fortunately, is not quite so prosperous as it was half a century ago, but is still going strong.

To meet the uninstructed yearnings of this mechanical and electrified generation, the nostrum vendors have developed pseudo-electric and mechanical devices to lure the dollars from the pockets of the unwary. Various "electric belts," "magnetic" rings and insoles and scores of other ridiculous contraptions have made comfortable fortunes for their promoters.

Among those which are being actively advertised today is the "thaumaturgic horse-collar" known as the Theronoid, and the men behind this hocus-pocus are clever, if not over-scrupulous. A glimpse of their methods may be of interest.

It has long been the policy of this Journal to give our readers the benefit of any sound new ideas in therapy, even though their promulgators have not yet made themselves famous. We strive, however, to make sure that our pages are kept free from the propaganda of those who aim to exploit the sick and suffering. But all editors (including ourselves) are human and, in the drive of busy days, slips will occasionally occur.

Back in 1928, we received a manuscript from a man named Crocker, dealing with the results obtained by subjecting certain patients to the action of a large solenoid. The article was reasonably well written; the apparatus used (a large, bulky machine, suitable only for office installation) was fully described; and the results claimed were not ridicuously extravagant and appeared interesting so, after verifying the fact that the author was entitled to write M.D. after his name, we accepted and published it in June of that year.

Some months later we learned, to our distress, that Dr. Crocker had been mixed up in a number of shady enterprises, and not long after that we received a flamboyant broadside of the notorious Theronoid, in which Crocker's article was played up in two colors, with the implication that whatever he had said of his large and massive solenoid, was also true of the "magic horse-collar." We have just discovered that this exploitation is still going on and have decided to publish the facts.

We make no claim to being infallible or omniscient and, while we use our best endeavors to keep dubious material out of our pages, we may, now and then, make a mistake; but when we find out that we have done so, we feel it our duty to straighten out the matter as best we can, so that our readers may no longer be misled.

It is human nature to impose on those who will stand for it.—Robt. Quillen.

Medical Reserve Officers

NO ONE knows the horrors of war so intimately and personally as does the soldier, who has seen it at first hand; and so there are no greater lovers of peace than the men of the Army.

Another special qualification of the Army Officer is that he has an intelligent basis for *knowing* that the most certain way of insuring peace is to keep our country in a state of *adequate* (not minimal) preparedness for meeting any possible emergency which may arise from the distress-

ingly unsettled political and financial conditions in Europe and Asia.

The general indications at present raise the thought that the National Defense is in for a hard session. The unbalanced budget suggests paring the appropriations for the Army and Navy; and at a time like this the pacifists, who are always vociferous beyond their numbers, are clamoring more hysterically than usual for further reductions in our already dangerously slender bulwarks against aggression.

Now, *today*, every officer of the Medical Reserve Corps of the Army and Navy, and all others who have the welfare of our Country at heart, should write *strong* letters to all of their representatives in the Congress, warning them to make strenuous efforts to resist the further weakening of our wall of national safety and urging that, on the contrary, they use every effort for the strengthening of our defense to the point where they will really *defend* us —no more!

Those who procrastinate in this matter may be too late to be helpful. These letters should be written before another sun sets.

Students of social problems have learned from students of the natural sciences that only by keeping in touch with reality can real life be understood.—Robert Maynard Hutchins.

The Frontispiece

IN OUR constant endeavor to make this journal more and more valuable to our readers we do not overlook the mechanical and artistic factors which make its pages attractive.

The portraits and biographies of past and present medical leaders, which are a regular feature, have met with wide and favorable comment, and now we plan to make these even more interesting and, as to the portraits, unique.

We have engaged the Chicago artist, Mr. Dom Lavin, to draw our portraits for a year, basing them upon photographs, biographies and other data which are available or, when the subject is within reach, upon an actual study of his person. These pictures will be reproduced in ink as near as possible to the color of the terra-cotta crayon in which the originals are drawn, and will not be obtainable elsewhere. They will be splendid for framing, to decorate physicians' offices, and if enough requests are received we will have copies made for this purpose and will furnish them at a nominal charge.

We shall be glad to hear how this effort to make our journal more attractive appeals to our readers.

FEBRUARY

(Cinquain)

Winter
Still holds the Earth,
But underneath the snow
The waking sap is stirring in
Tree roots.

—G. B. L.

LEADING · ARTICLES

Clinical Use of Female Sex Hormone

(A Study of 543 Case Reports)

By Gregory Stragnell, M.D., New York City

THE following study is the result of a series of cases which were compiled from answers to a questionnaire which was sent out to the users of a standardized follicular sex hormone. We are extremely grateful to the medical practitioners throughout the United States for their splendid cooperation which has made possible this work, the object of which was to determine the clinical efficacy, the fields of application and the limitations of the female sex hormone Progynon, which has been perfected in the Schering laboratories.

We were not only dealing with a new endocrine preparation, but also a preparation in an relatively new form—tablets for oral administration. Naturally there was a great deal of skepticism about the efficacy of an endocrine sex hormone product which would be administered by mouth. Previous to the perfection of the tablet form, as far as we know, no *standardized* female sex hormone had been administered successfully by the oral route. In the laboratories we were able to demonstrate, consistently and repeatedly, that the tablet was efficacious in animals (rats, mice, guinea pigs, rabbits and apes), but it required a wide field of use and clinical application to corroborate what had been demonstrated in the laboratory. The difficulties that were encountered in the preparation of a successful oral follicular sex hormone were overcome, and finally it was found that a definite relationship between peroral and parenteral absorption could be established for this standardized hormone provided it is administered perorally in small, divided doses. The clinical evidence bears this out. We can safely state that, if we accept a ratio of five units by mouth to one by injection, we can measure the required dose.

This achievement is really a step forward in hormone therapy. Progynon may be administered by mouth with the same accuracy as thyroid is given. Certain workers had argued that the dosage advocated for this product was inadequate to produce results, from the point of view that it was a substitution therapy. From the doses used, however, it seems to act as a stimulant, in many cases, as well as to supply actual hormone material. Moreover, from a clinical point of view, many patients are suffering from an insufficiency of the hormone, rather than its complete absence.

The clinical histories presented—543 of them*—come from every state in the Union and cover a diverse field of female endocrine maladjustments. Nothing has been omitted and nothing added. Some of these case histories are not so complete as one would like to have them, but what they lack in detail they make up in sincerity and integrity. In no instance was a physician sending a case history personally interviewed. Medical men were asked to report the good as well as the bad results obtained.

Many uses were found for the product which we, ourselves, had not previously advocated; for example, in the vomiting and nausea of pregnancy and in sterility and frigidity. A study of the case histories shows that it is of great value in the majority of these cases. The pros and cons for its employment in such conditions are discussed under the separate headings.

*The case histories and complete tables will appear in the author's reprints.

TABLE I

	Duration of Amenorrhea																	
	Months													Years				
	1	2	3	4	5	6	7	8	9	10	11	12	18	2	3	4	5	6	12
Ampules — positive....	2	2	2	2	1	8	1	—	1	—	1	11	—	1	1	—	1	1	—
Tablets — positive....	1	1	3	3	1	3	1	2	—	—	—	2	—	2	—	1	—	—	—
Tab. & Amp.—pos.....	—	2	1	—	—	2	—	1	—	—	—	—	1	—	—	—	1	—	—
Ampules — negative..	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Tablets — negative..	—	—	1	—	1	—	—	—	—	—	—	1	—	1	1	—	—	—	1
Tab. & Amp.—neg.....	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	1	—	—

AMENORRHEA

I will now attempt to discuss some of the phases which presented themselves in the cases of amenorrhea. In looking over the tables we find many amenorrheas of definite duration. (See Table I).

Menstrual function was restored in 35 cases by the use of ampules, the duration of the amenorrhea being from one month to six years. A study of the use of the tablets shows that menstruation was restored in 20 cases of definite durations, running from one month to four years, which seems to prove the potency of the tablets beyond question. It is possible that larger doses of the tablets would be required in long-standing cases of amenorrhea where failure is recorded.

An interesting situation in these cases of amenorrhea and oligomenorrhea was noted in the types which were connected with **obesity.** In 10 cases reported it was stated that there was a marked reduction in weight. In one case, six pounds were lost in one month; in two cases ten pounds; in one case, sixteen pounds; in one case, eighteen pounds; in one case twenty pounds; and in still another, twenty-five pounds were lost, but this last case was one where thyroid medication was used as well, and therefore the loss of weight cannot be considered as being attributable solely to the follicular hormone medication. This is worthy of more detailed study.

In some of the cases Progynon apparently did not "take hold". Whether this was due to inadequate dosage or not we cannot state. Prolonged observation may be required to adjust the dosage. At times large doses are required. In many cases of obesity the benefits were marked, both as to the establishment of menstruation and the reduction in weight. It seems that when the product is used in these obese patients, other glandular preparations should not be used until the effects of the Progynon have been established. In some cases the addition of thyroid medication has apparently hindered the establishment of the normal menstrual flow.

According to the following table, a study of all the cases in which obesity is mentioned, we find that the menses were established in 22 cases; menses were established and weight lost in 12; while 5 cases were reported as negative. (See Table II).

TABLE II

	Amp.	Tab.	Amp. & Tab.
Menses	12	4	6
Menses and Loss of Weight	7	4	1
No Result	2	1	2

In many of these obese patients there was a marked increase in energy, relief of fatigue and headaches, and improvement in skin eruptions. The simultaneous reduction in weight and relief from headache in some of the cases seem to point to ovarian underfunction as the underlying cause of the train of symptoms mentioned, but this is hypothetical. The effect may be indirect, through stimulation of the pituitary gland by the female sex hormone.

The gain in weight following castration and the onset of the menopause points definitely to ovarian hypofunction as a

possible cause of endocrine obesity, probably due to a concomitant thyroid atrophy with a fall in the basal metabolism. That the administration of female sex hormone raises the basal exchange in menopausal women, was shown by Zondek and others. The reported reduction in weight by the administration of Progynon may, therefore, be due to its ability to normalize the basal exchange in women suffering from ovarian hypofunction. Fellner (*Muenchen. med. Wchnschr.*, 1:139, 1931) says that, if obesity is due to ovarian hypofunction, good results may be obtained by the administration of female sex hormone.

There seems to be a marked relationship between *neurotic manifestations* and disorders of the menstrual cycle. Many workers have attributed these disorders to psychic causes, and endocrinologists have sometimes attributed mental and nervous disorders to malfunction of the endocrine glands. In seven of the cases of amenorrhea, mental symptoms were reported. In each instance the mental disturbance was benefited and, in some cases, completely removed when Progynon was used. Menstrual periodicity was reestablished, but in some instances the feeling of wellbeing and stability of the nervous system was apparent before the reestablishment of the menstrual cycle.

I have grouped under amenorrhea all cases that roughly fall in this category, such as primary and secondary amenorrhea (with or without dysmenorrhea), oligomenorrhea and hypomenorrhea. Some of these cases are not clear-cut. The designations of "excellent", "good", "fair", "negative" and "questionable" are, in the majority of cases, arbitrary, for which I assume complete responsibility. I feel that I have been conservative in this tabulation. Under Excellent, Good and Fair, have been listed those cases in which there was definite evidence that the material was effective. Under Excellent, are listed those cases where the patient's symptoms were completely eradicated; under Good, those where some of the symptoms were completely removed and others ameliorated; under Fair, those where there was some relief. As an example, in Case No. 215 there was a suppression of menstrual flow of six months' duration, with mental symptoms. The final report states: "Menses regular; mental condition cleared up promptly and there was a gain in weight; the family were delighted;" etc. I felt justified in listing this under Excellent. Case No. 273, reported as "Irregular menses; tablets prescribed t.i.d. for ten day; regular menses of four days' flow resulted." The doctor's report was "Good" and "Satisfactory" and I have left it as such. Under Fair, we have as an example Case No. 358; "Uterine hypoplasia; ampule medication used; slight improvement was noted in the menstrual flow" and I felt that it was conservative to list this case under Fair. Under Questionable, I listed four cases where the doctors were not sure whether the medication was responsible for the result or not.

In the amenorrhea cases there are 230, of which 119 reported the results as Excellent; 55 as Good; 16 as Fair; 36 as Negative and 4 as Doubtful. In some of the cases reported as Negative, improper dosage may have been used. In certain cases the patient was not one who would be benefited by the use of any follicular hormone. As an example of this, I recall a case where a physician used Progynon, and some time later he wrote and said that there had been both an infectious condition and a new growth in the pelvic cavity. This was a pardonable error, as it was merely a question of diagnosis and the physician was frank enough to admit his mistake. The action of the product is not one hundred percent positive.

Under Positive the entire group of Excellent, Good and Fair are listed. These show that the follicular hormone had a definite effect upon the organism. We finally consider 230 cases of amenorrhea, eliminating the 4 doubtful ones, which we can speak of as Positive and Negative. Out of these we have 190 positive and 36 negative. Roughly, this represents 83 percent of positive reactions. (Table III).

TABLE III

Excellent	Good	Fair	Negative	Questionable	Total	Positive	Negative
119	55	16	36	4	230	190 or 83%	36 or 17%

After a survey of the above figures and an observation of past efforts at endocrine medication for disorders of the female sex hormone cycle, I feel justified in stating

that this standardized material is the most efficacious female sex hormone preparation within my knowledge and is effective in either tablet or ampule form for most disorders of the menstrual cycle.

Dysmenorrhea

Dysmenorrhea of functional origin is frequently associated with acute anteflexion and hypoplasia of the generative organs, indicating an arrest of development due to hypofunction of the ovaries, either primary or secondary to malfunction of the pituitary gland. Female sex hormone, in a potent form, increases growth and vascularity of the uterus, in some cases bringing it to the normal adult size. We can thus explain the frequently beneficial results obtained from the use of the hormone in this condition, which is exceedingly prevalent.

The association of temporary amenorrhea, oligomenorrhea and hypomenorrhea with dysmenorrhea is well known. I have, however, listed under dysmenorrhea only those cases in which painful menstruation was the outstanding symptom. The results in 40 cases were reported: 15 as excellent, 15 as good, 7 as fair and 3 negative. There are 37 positive cases, where the material had a distinct effect in ameliorating or obliterating the symptomatology, or 92 percent of positive results. Among the cases listed, mention is made of four instances where nervous symptoms are included among the symptoms of dysmenorrhea. The tablets produced results; ampules were used with success; and the mixed treatment was also successful. In this group of dysmenorrhea cases there are also reported two cases of mental disturbance associated with the other conditions. The mental symptoms were markedly improved. I feel that this group of dysmenorrhea cases is fairly representative.

Menopause

The menopause is a period in a woman's life which has hitherto been looked upon with a certain amount of dread. Apparently, in our present-day civilization, the change which takes place from the period of functioning to nonfunctioning of the ovaries is somewhat abrupt and frequently results in a series of disturbances. Among these we have those of the autonomic nervous system, metabolic changes, instability of the emotional status and various other symptoms that are well known to the medical profession. These make themselves noticed by hot and cold flushes, headache, vertigo and tachycardia. Also, among the metabolic changes, we find many cases of endocrine arthritis and neurodermatitis, pruritis, eczemas and other dermatoses. Then we have the large group of involutional melancholias and mental symptoms.

Three types of menopausal disorders are listed: first, the socalled natural menopause; second, the premature menopause; and in the third group of artificial menopause we have listed those cases where surgical interference, the x-rays or radium therapy has interfered with endocrine functioning. I shall not undertake a too-detailed analysis of the menopausal cases presented, but only mention the salient features in a general way.

There are 153 cases of natural menopause. In 74 of these cases the results were excellent; in 45 cases, good; in 14 cases, fair; and in 20 cases the results were negative. The tablet medication was just as efficacious as the ampule medication. I think it wise that the physician should use his own judgment as to the type of medication he is to use; also as to the dosage required to establish an endocrine balance. Of the 153 cases, I classified 133 (87 percent) as positive.

Mental Disturbances:—I have not listed the nervous manifestations in the menopausal disorders separately, as practically every case presents some nervous symptoms. Mention is made, however, of certain mental conditions which were noted in the histories. Out of these 153 cases, in 14 of the histories the mental disturbance is stressed. In all but one of these there was a marked improvement of all symptoms. In 9 of these 14 cases, the tablets were used, with markedly beneficial results.

Obesities:—In looking over the chart where mention is made of obesity concomitant with the menopausal disturbances, we notice frequent loss of weight. In case No. 646, two months' treatment caused a loss of weight of 18 pounds. This seems to check up with the loss of weight in the amenorrhea cases which were accompanied by obesity. In some cases the use of Progynon caused the restoration of menses in these menopausal cases. Most marked was the control of the hot and cold flushes, insomnia, headache, the elimination of spells of depression and lessened irritability.

The effect produced on the various

skin and joint disorders is specially shown in case No. 572, where the menopausal disorder was associated with chronic arthritis of nine years' duration, and I quote the doctor's words: "A great improvement; the patient walked six blocks to my office and does all her work; pain nearly gone; swelling in joints almost gone; patient looks 10 years younger." It was also of great benefit in neurodermatitis, pruritus vulvae and senile eczemas and seemed to have a distinct effect on the symptoms of weakness, dizziness and cardiac palpitation.

One case is rather interesting, having been marked by edema, hot flushes and nervous neurotic pains (Case 375). The use of the mixed treatment caused a marked diuresis, removal of pain, decrease in nervousness, a disappearance of the puffiness and a decrease of five pounds in weight. Another interesting point is brought out in Case 654, of vagotonia and an irritable colon, where mixed treatment brought complete relief of symptoms.

Premature Menopause

The next group consists of cases of premature menopause, of which 8 were reported. The youngest of these patients was 23 years old; the oldest 38. Three (3) of the results are reported as excellent; 4 as good; and 1 as fair. I feel that no more need be said about this group.

Artificial Menopause

There were 45 cases of artificial menopause. The general findings in this group of cases resemble closely those of the true menopausal symptoms and the figures also show that the results are practically identical. Here, too, flushing and the various vagotonic manifestations were present. Some of these cases, in spite of the youth of the patients, were of many years' duration. The youngest was a patient of 24 years; the oldest 53; but the average is younger than those of the socalled natural menopause, but somewhat older than those of the premature menopause. The x-rays, radium and surgery were responsible for these conditions. Among them we find mental symptoms (which were relieved), obesities and the entire train of nervous disorders. Of the 45 cases, 20 were reported as excellent; 17 as good; one as fair; 5 as negative; and 2 questionable. The percentage of positives is the same as in the socalled natural menopause (87 percent), and two of these cases were indeterminate. One rather unusual case, No. 306, was that of a woman aged 47, whose symptoms included headaches, pernicious vomiting, excitability, flushing and lassitude; ampules were used and there was a relief of the headaches, vomiting and flushing and a gain in bodily strength. The value of Progynon in this type of case is further supported by the work of Diasio, Bethel Solomons, Novak, Last and others.

Frigidity

While the possibility that Progynon might be useful in a certain number of cases of frigidity was considered from a theoretical point of view, it was not at all certain what the clinical findings would be. Fellner reports good results in this condition, if the drug is administered shortly before cohabitation. No mention was made of it in the early literature until there was sufficient clinical data to show that the product was efficacious. Frigidity is not an entity, for often the condition is secondary to various psychologic and neurotic manifestations. We cannot state that frigidity can be influenced to the same degree in every case, as it was in the 14 cases which are reported. It may well be that ovarian malfunctions are a secondary manifestation, not alone of changed living conditions, but also, perhaps, may have some relationship to psychologic inhibitions, taboos, etc. Only intelligent research along these lines will give the answer to this important problem. Even if frigidity is the result of psychologic situations, it is reasonable to suppose that an excess of follicular hormone should help break down the barrier.

Frigidity causes much marital discord and has a great deal to do with giving many women a feeling of an inadequately completed existence. The lessening of the general feeling of prudery has done much to bring this subject to the foreground. Every physician is in a position to aid many women in this particular field. We have been told on good authority that physicians have found approximately 85 percent of women more or less frigid.

The average age of the women, whose cases are tabulated in this chart on frigidity, was in the early thirties, at a time when it seems plausible that a woman should be enjoying a full sex life. This

fulfillment of her sexual impulses has much to do with her general state of wellbeing. Of the 14 cases reported, all were benefited, whether tablets or ampules were used.

Nausea and Vomiting of Pregnancy

A rather startling result has been shown in the case reports on the nausea and vomiting of pregnancy. At first thought it would seem that the addition of the female follicular sex hormone in a pregnant woman would not be beneficial to her. It is for this reason that, in the original literature, no mention was made of the utility of Progynon for this type of case. However some physicians found reason to use this material for this purpose. The results have been rather unusual. Fifteen (15) cases were reported, of which 13 cases (85 percent) showed positive results. Where ampule medication was used the results were 100 percent. Whether the two failures which are attributed to the use of the tablet are due to insufficient dosage or not, we cannot tell, for the dosage was not reported. There is also a possibility that the medication was not retained. At any rate in some instances the tablets were effective.

The age variance in these cases of nausea and vomiting of pregnancy was wide. The youngest patient was seventeen and the oldest fifty. If these results are confirmed in a larger series of cases, under careful observation, it will be a very important addition to the usefulness of the material, for nausea and vomiting of pregnancy in the past has been a troublesome and annoying condition at best.

Functional Menorrhagia and Metrorrhagia

Experimental and clinical data suggest that these conditions are due to continued and unantagonized action of the female sex hormone upon the uterine mucosa, giving rise to the well known clinical picture of endometrial hyperplasia. In these cases, operative findings invariably show cystic follicles and a total absence of corpora lutea. Theoretically, therefore, the administration of female sex hormone in these cases is of no value, as it is the want of the lutein hormone (Progestin) that is at the root of the trouble. The cure of functional metrorrhagia by the use of Progynon tablets, in four cases herein reported, must be discounted, inasmuch as the group is too small. The reader should reserve judgment until a more extensive clinical investigation is made.

Infantilism

One of the most interesting charts that I have studied is the one listed under infantilism. This is a rather arbitrary grouping. The diagnosis of infantilism was apparently based on a lack of development of the genital organs, breasts and secondary sex characteristics. The results, in some of the cases of undeveloped sex organs, are rather striking. In Case 360, a 32 year old woman is listed under undeveloped sex organs. The results are reported as, "Beginning development of sex organs, with some flow." The case 268, that of an 18 year old girl, in which it is reported that all genital organs were under the usual size and where the mixed medication was used, the report reads, "Showing signs of development of uterus, enlarging breasts and has just had a menstrual period of three days scant flow."

The most marked case is No. 287, where there was an infantile uterus with sclerotic ovaries. The patient had never menstruated. A laparotomy some years ago established a plastic vagina, where a pencil-sized tube was made into a full-sized passage. Menstruation has been established by the use of Progynon. I feel that this particular condition is well worth careful study.

Undevelopment or atrophy of the uterus is a constant finding in amenorrhea and oligomenorrhea, whether primary ovarian or secondary to pituitary hypofunction. Experimental and clinical observations have shown that Progynon is capable of producing growth and vascularity of the uterus and it has been demonstrated that an adequate supply of follicular hormone is necessary to prepare the uterus to respond normally to the action of the corpus luteum hormone.

The degree of uterine growth incident to feeding this product is directly proportional to the size of the dose. An amenorrheic woman with a very small uterus requires a relatively large dose of female sex hormone in order to overcome the impediment to menstruation, acquired during a long period of amenorrhea. It was shown clinically that as much as 400 Allen-Doisy units, administered by mouth daily, may be necessary to overcome this condition.

Sterility

The last chart concerns sterility. On

TABLE IV

RESULTS WITH AMPULES AND TABLETS

	Amp.	Tab.	Amp. & Tab.
Amenorrhea			
positive	87	73	26
negative	11	13	11
Menopause			
positive	38	63	31
negative	6	7	4
Premature Menopause			
positive	5	3	—
negative	—	—	—
Artificial Menopause			
positive	24	10	6
negative	2	3	—
Dysmenorrhea			
positive	12	18	3
negative	2	1	—
Frigidity			
positive	6	3	5
negative	—	—	—
Infantilism			
positive	6	4	1
negative	1	—	—
Metrorrhagia			
positive	2	1	1
negative	—	—	—
Nausea and Vomiting of Pregnancy			
positive	10	3	—
negative	—	2	—
Miscellaneous			
positive	2	2	—
negative	—	—	—
Sterility			
positive	5	5	1
negative	—	—	—

scientific grounds I had refrained from suggesting the use of Progynon in this condition, and it was not until Stein, of Chicago, presented his excellent paper at the A.M.A. meeting in Philadelphia, that it became obvious that, in certain cases, marked benefit was derived from the administration of this preparation.

Stein reported upon 10 cases of sterility, in 5 of which treatment with Progynon was followed by pregnancy. In our series of 22 cases, positive results from treatment occurred in 13, or 60 percent.

The cases must, of course, be carefully selected, the presence of old gonorrheal infection, occlusion of the tubes, hyperacidity of the vaginal secretion, displacements and other possible causes of the condition being excluded by thorough and careful examination. It must also be borne in mind that in some 25 percent of all cases of sterility, the fault lies with the male partner of the marriage.

Subject to the above mentioned reservations, it seems that Progynon may be employed with much advantage in this field.

TABLE V

SUMMARY OF RESULTS

	Cases	Positive	Percentage
Amenorrhea	230	190	83%
Menopause	153	133	87%
Premature Menopause	9	8	89%
Artificial Menopause	45	38	85%
Dysmenorrhea	40	37	92%
Nausea and Vomiting of Pregnancy	15	13	87%
Frigidity	14	14	100%
Metrorrhagia	4	4	100%
Infantilism	13	12	92%
Sterility	22	13	59%
Miscellaneous	4	4	——
Attempted Interruption of Pregnancy	1	0	——

320 E. 42nd Street.

ATOM, MAN AND STAR

"Nearly midway in scale between the atom and the star there is another structure no less marvellous — the human body! Man is slightly nearer to the atom than to the star. About 10^{27} atoms (a row of figures has become too big) build his body; about 10^{28} human bodies constitute enough material to build a star. From his central position man can survey the grandest works of Nature with the astronomer or the minutest works with the physicist. I ask you to look both ways, for the road to a knowledge of the stars leads through the atom; and important knowledge of the atom has been reached through the stars.".—ARTHUR STANLEY EDDINGTON.

Bronchial Asthma

An Original Method of Treatment

By Francis E. Park, M.D., Boston, Mass.

FAR back in antiquity, several hundred years before the Christian Era, Hippocrates used the Greek verb *asthaino*, "I gasp for breath", to describe an affliction that has come down through the ages unchanged in its symptoms and generally uninfluenced in its course by any medical treatment, save what has come in recent times along the line of temporary alleviation of acute attacks.

Probably its literature is as voluminous as that of any known disease. Certainly the suffering and terrible distress it causes is greater. It is not uncommon to find cases, starting in early infancy, persisting well into advanced age. Cancer and tuberculosis run their course in a comparatively short time, but the asthmatic patient lives on indefinitely, in constant terror of his stifling spasms.

I will not attempt to enumerate the theories or the treatments of the past. They have proved inadequate and are of no interest to us as busy practitioners. Out of the confusing mass, however, it has at last come to be accepted, that a reflex associated with the nerve fibres of the first cranial nerve, piercing the cribriform plate of the ethmoid bone, has a great deal to do with bronchial spasm. From this theory, a practice has grown up, which has become at the present day practically universal, of endeavoring to find some special irritant which so stimulates this nerve center as to precipitate the action of the reflex located there and produce a spasm of the bronchioles in the lungs. As a results of this, extracts from hundreds of different things, ranging from hairs of animals to the protein of wheat, especially of the pollens of flowers and grasses, are being injected, in the hope that by the process of elimination, the principal offender which causes the attack to appear will be discovered, and by immunizing the patient to this substance we may give him relief. In rare cases a good result has been obtained in this manner. The failures vastly outnumber the successes and the victim of asthma goes on, year after year, hopelessly trying to find his arch enemy.

There has appeared, however, within a few years, a small group of men headed by Dr. Burton Haseltine, of Chicago, who, working on this same theory, have endeavored, by treatment, to cure the irritated condition of the ethmoid reflex and in this manner to render the patient nonsusceptible to *any* irritant. The success of their treatment, however, depends very largely upon a higher degree of special operative skill than the ordinary nasal specialist possesses, and without this skill results of the operation are frequently very deplorable.

After a great many years of clinical observation, I have come to believe, as they do, that there are several factors whose presence is necessary to produce the disease we call asthma. In the first place, in every case I believe there must be present an irritation of the reflex located in the ethmoid region. This can be either mechanical pressure, as from growths, or an inflamed condition, resulting from chronic bacterial irritation. This in itself, however, is not sufficient to produce asthma. Millions of people are living today with these conditions present in their noses who have not a symptom of asthma. There must be something else in conjunction with this irritation to produce the disease. This, I believe, to be furnished by a general *lowered nerve tone*, such as may be produced by some severe infection, such as an attack of influenza or pneumonia; or the continued assaults of chronic sepsis, as from a gall-bladder, alveolar pus socket, septic tonsil, etc. We might liken the nasal condition to a keg of gunpowder and the lowered resistance, due to infection, to the fuse which causes the explosion. Both conditions must be present, I believe, in every case, to produce asthma. If such a theory is correct, then to produce a cure, three things must be accomplished:

First, the irritation in the ethmoid region must be removed;

Second, the bacterial infection, if still present, must be taken care of;

Third, the nerve tone, which has been lost, must be restored.

My attention was first drawn to the method of treatment, which I will describe later, while endeavoring to save from immediate death by suffocation, a patient who had suffered from a very severe type of asthma dating back 49 years, to infancy. The particular attack of which I speak had lasted for 3 weeks, with scarcely an intermission. There had come a time when the usual emergency remedies ceased to help. My patient was dying from asphyxiation before my eyes. In desperation I gave him an intravenous injection of a solution which I had perfected many years previously for the treatment of pneumonia. A constant phenomenon immediately following this injection was spasmodic emesis. I hoped that this latter might do something to break up the respiratory spasm. It failed to act as it usually did, so far as the emesis was concerned, but, to my great relief the patient speedily grew better and the cyanosis disappeared.

Following up this clue, he was given daily injections and, in about a month's time, was discharged entirely free of his asthma. This relief has persisted up to the present time—nearly 3 years.

Other patients hearing of the result came to me and were treated, with varying success, but all showed a marked improvement, such as I had never seen from the use of any other remedy in asthma.

As cases began to multiply and my experience broaden, I found a certain type which responded somewhat, but did not obtain complete relief. In these cases the ethmoid irritation predominated.

Little by little a plan of treatment was evolved which is giving me satisfactory results. This treatment can be divided into two sections: First, a general one, which involves the cleaning up surgically of any chronic condition which is draining the patient's vital strength. This also applies to such nasal abnormalities as polyps, spurs and badly deviated septums, but only in very exceptional cases to sinus irritation. The other part of the treatment is grouped under three heads:

First, treatment of the sinuses by means of radium, heavily screened and applied on the outside;

Second, checking of active bacterial invasion by means of a solution which I have perfected, called Creohex;

Third, restoration of the impaired nerve force by means of intramuscular injections of a solution of radio-active deep sea water.

The Use of Radium

This subject is an exceedingly important one, apart from its use in asthma, for by it, I believe, we have found a better treatment for sinus inflammation than any with which we have formerly been conversant. I discovered it while treating the inflamed tonsils of a child suffering from acute articular rheumatism. Within a few days of the first application of the radium to the tonsils, I discovered that I had apparently cured an intractable nasal catarrh, with which the child had been afflicted for many years. As this malady did not return, radium was used directly on the noses of a number of children suffering from the same condition, and the same result was observed in each case. From the treatment of nasal catarrh to that of the accessory sinuses of the nose was but a step; and for 5 years I have been treating all acute and chronic catarrhal infections of the facial sinuses in this manner, with uniform success.

The treatment is simple, safe and painless; the relief, as compared with the operative treatment, much more speedy. This will later be made the subject of a special paper, as its importance deserves.

Intravenous Injection of Creohex

It is now 20 years since I perfected the formula which I call Creohex, for the treatment of pneumonia. Used in the early stage of any type of this disease it is of great benefit. Later experience taught me that the particular kind of bacteria made no difference in the result. It is, moreover, just as effective in acute erysipelas or influenza or a septic sore throat. Carefully conducted laboratory experiments showed the reason. Within 30 minutes after the injection of this solution into the blood stream, the white corpuscles have enormously increased; in some of the cases tested as much as 50 percent. There is also, I believe, a slight bactericidal action from the hexamine and creosote used in the formula. This weakening of the germ action and the enormous increase of the protective and defensive power of the body ac-

counts for the speedy disappearance of the disease, thus verifying the important observations of Metchnikoff.

The formula of Creohex is:
Each 5 cc. of the combined solutions (A and B) contains the following:*

Creosote Solution in		
Calcium	1.60 gr.	(0.102 Gm.)
Sodium Salicylate	1.28 gr.	(0.083 Gm.)
Iron Phosphate	1.28 gr.	(0.083 Gm.)
Hexamine	1.28 gr.	(0.083 Gm.)
Isotonic Salt Solution	Q.S.	(5.000)

This formula is composed of substances which I have found, in a medical experience of over 40 years, to be of distinct value in the treatment of pneumonia, with safe dosage, by a wide margin, of each ingredient. The individual dose of the solution varies according to the age and degree of robustness of the individual. For instance, in the case of a small, weak woman, or a child about 10 to 12 years of age, 2 cc. is sufficient; while in the case of a large, powerful man, I have given as much as 6 cc. at a single dose. There is no anaphylactic effect. There is, however, an immediate and sometimes, for a very short period of time (less than 2 minutes) an intense feeling of nausea, together with marked flushing of the face — apparently a central reflex. This disappears as quickly as it comes and no further unpleasantness is experienced.

In the many thousands of injections which I have given, I have never observed any harm to follow; neither do I know of any contraindication to its use. It is well to reassure the patient regarding the nausea which may occur, so as to allay any anxiety on his part. I have so thoroughly reported this treatment of acute infections by means of Creohex, in various articles which have been published from time to time in the medical journals, of which one of the more recent will be found in CLINICAL MEDICINE AND SURGERY (Vol. 33, page 403, June, 1926), that it will not be necessary for me to go into details further than to make the demonstrable statement that it acts as an immediate and efficient treatment for any bacterial infection.

RADIO-ACTIVE SOLUTION OF DEEP SEA WATER

My attention was first called to the remarkable tonic properties of deep sea water by an article in the "International Medical Annual" of 1910, (page 98), entitled "Injection of Sea-Water," by Robert Simon, M.D., University of Paris. Having verified in my clinical work the claims made by Dr. Simon, I have used this preparation very largely ever since. I know of nothing in our therapeutic armamentarium that can equal its effectiveness.*

According to the observations of Dr. René Quinton, of Paris, the discoverer of the method, sea-water contains 26 minerals, some of them in such minute quantity as to be demonstrable only by the spectroscope. Furthermore, these minerals are grouped in a similar manner to those contained in the fluids of the body; and they are in such an isotonic solution that they can be easily picked up and used as needed for repair work, by the cells. Soon after Dr. Quinton published his discovery, I had hazarded an opinion, based on the similarity of the results obtained from the use of his sea-water solution and those I had seen following the use of thorium x—the emanation from radio thorium—that radium would also be added to the list. The observations of Professor Jollie, of the University of Cambridge, England, have since proved that it is true and that the whole ocean-body is radio-active. Here at hand was the ideal method of restoring the lost tone and fulfilling the third requirement.

To sum up, then, we have, first, an efficient method of curing the ethmoid irritation; second, a successful treatment for bacterial invasion; and third, an excellent tonic to restore nerve tone.

It is well to follow up, every six months,

*Creohex solution can be prepared by dissolving 20 grains (1.32 Gm.) each of synthetic sodium salicylate and methenamine, together with 10 grains (0.65 Gm.) of soluble phosphate of iron (care being taken to use only chemicals of known purity), in 2 ounces (60 cc.) of triple-distilled water, shaking occasionally, until dissolved. Do not heat it. When dissolved, add 15 minims (1 cc.) of a saturated solution of beechwood creosote in lime water, shaking until thoroughly mixed. *Do not use after it begins to change color.*

The dose is from 3 to 5 cc., given intravenously in the basilic vein.

*Radio-active sea water is prepared by adding 2 parts of sea water, obtained in the open ocean at a depth of 100 feet, to 3 parts of any pure spring water. To this is added 10 micrograms of radium chloride, in solution, and the whole is sterilized by filtration through porcelain. *No heat is used.* The dose varies from 10 to 20 cc. and is given deep into the gluteal muscle, with an ordinary glass syringe. There is some reaction the first few times it is used, consisting of tenderness at the site of the injection for a few hours, but this diminishes as the system becomes accustomed to it.

the treatment I have outlined with a course of mixed protective vaccine, to prevent the lighting up of fresh infection from nasal and bronchial colds.

In many cases, the relief will be felt at once and little treatment will be needed. In the majority of the cases seen, especially those in which meddlesome nasal surgery has been done, it will be necessary to use the customary palliatives, along with the treatment, for a short time, until the attacks disappear.

In the report of the clinical cases accompanying this paper, I have reported two in some detail, and the whole series of 38 cases has been embodied in a chart.

Case Reports

Case 1: Mrs. S., married, 57 years of age. I first saw her on July 23, 1931.

Her family history was negative, so far as anything went that was even remotely connected with her trouble.

As a girl she was active and healthy except for one thing; she was always getting "colds in the head" and during her 'teens she had two severe attacks of tonsillitis.

In her case I could get no history of a hayfever, gradually increasing in severity until it at last became asthma. The onset in her case was sudden and came at the age of 37. At first the attacks were several weeks apart, but gradually they came more frequently and lasted longer. For the past year she had been confined to her house and had been entirely incapacitated from any work. During these 20 years she has been continually under treatment with one doctor after another, but could obtain no relief. By one it was discovered that she had nasal polypi, and these were removed, but with no relief to her asthma. Five years later they were again removed and have not recurred.

She was brought to my office in a taxi, with a minimum of exertion on her part, yet she was gasping for breath and cyanotic. Auscultation revealed lungs full of noisy, coarse rales. The pulse was rapid (120) and the systolic blood pressure, 140.

In addition to her asthma, there was a history of a chronic stomach disability — pain, coming on regularly about an hour after eating; and there was also a history of constant pain, dating back 8 years, at the level of the lower part of the right scapula.

The epigastrium was sensitive to pressure, but no mass could be felt. All of the facial sinuses were cloudy on x-ray examination; and by the same means a small peptic ulcer was discovered on the lesser curvature of the stomach. Her bowels were badly constipated.

Treatment naturally fell into two divisions: one for the asthma, and another for the gastro-intestinal defects.

For the former, she was given daily injections, into one or another of the basilic veins of the forearm, of 4 cc. of Creohex: every other day an intramuscular injection of 10 cc. of radioactive sea water into the upper portion of the gluteal muscle; once in 4 days the radium plaque, containing 11 milligrams of radium element, screened with 2 thicknesses of lead, approximating 2 mm. in thickness, was applied, giving each sinus a 20-minute application, the plaque, with its lead screen, being placed on the skin directly over the sinus.

This treatment was continued for 2 months. She responded, almost from the first day, with complete freedom from asthma, but, owing to the severe and chronic type, I thought best to continue the treatment long after the symptoms had ceased.

She was given pepsin, pancreatin and bismuth subnitrate, for the stomach, and Kathartones and Chondremul for the constipation.

The case is practically discharged now. For nearly three months she has had no asthma. Her pulse is normal, likewise the basal metabolism. She goes out when she pleases and does her own housework. Her stomach and bowels are likewise functioning well.

Case 2: Mrs. J., widow, age 59 years. The family history in this case was likewise negative. There was a history, in an otherwise healthy child, of frequent "bronchial colds."

In 1916 she had appendicitis and was operated upon. Soon after this she began to have what her family physician called "rose cold." This condition did not yield to treatment, but grew steadily worse for about a year, when she had her first bronchial spasm.

From that time on, the condition was bad. She went to specialist after specialist, had several nasal operations and tried a change of climate, all in vain.

I saw her first in my office Aug. 2, 1929. A tall, rather fleshy woman, she was fighting for breath and her lips and fingernails were blue. It was necessary to wait some time, until a large dose of epinephrin had done its work, before an examination could be made.

Her pulse, before the injection, was 116; very small and weak. The color test showed but 60 percent of hemoglobin. A loud, hemic, systolic murmur was heard over the precordium, and the lungs were filled with coarse, squeaking rales. A tumor was felt in the lower abdomen, central in position and the size of a child's head at term. Through the vagina, this was found to be a fibroid tumor, connected with the uterus. It was bleeding and was apparently the cause of her anemia. The urine showed a trace of albumin.

Her general condition was so bad that I referred her at once to a private sanitarium, where she was under treatment for two months.

The treatment, so far as the asthma was concerned, was practically the same as that outlined in Case 1. She responded very quickly and was soon free of the asthma. The anemia persisted, as it was impossible to stop the constant oozing from the fibroid. In spite of this, however, the general condition was so good that, early in October, she underwent a severe and prolonged laparotomy. The tumor was removed and she made an uneventful recovery. Since that time I have treated her for lobar pneumonia and pertussis, without any recurrence of her asthma. Today she is the picture of health and full of vitality, and her asthma has not recurred.

TABLE SHOWING CLINICAL PARTICULARS OF 38 OBSERVED CASES OF ASTHMA

Case No.	Sex and Age	History of Patient	Treatment	Results	Remarks
1.....	M 10 y.	Abdominal abscess at 3 weeks old; followed by eczema; broncho-pneumonia; asthma, since then; undersized; chest deformed; cloudy sinuses.	Creohex; radioactive sea water (R. A. S. W.); 20 minutes active radium exposure to each sinus once weekly; U. V. irradiation to chest and abdomen daily.	Immediate response. After 6 months treatment, is entirely well.	Chest has become normal.
2.....	M 8 y.	Croup at 3 y.; asthmatic attacks since; nasal sinuses infected.	As in case 1, with addition of cod-liver oil.	Steady improvement for 6 weeks; then lost sight of.	
3.....	M 8 y.	Bronchitis at 1 y.; persistent asthma since scarlet fever at 6 y.; undersized.	As in case 1, with several tonics, digestives and laxatives.	Was free from asthma in 2 weeks; treated for 8 months and discharged clinically well.	
4.....	M 5 y.	Has had severe asthmatic attacks since babyhood; undersized; anemic.	As in case 1, with general tonics.	Immediate improvement; treated for 4 months; practically well since.	
5.....	M 13 y	Asthma since age of 4 y., which constantly became worse: purulent discharge from nostrils.	As in case 1	Asthma checked at once.	Still undergoing treatment.
6.....	F 46 y.	Asthma for past 15 years; anemic; heart trouble; uterine fibroid.	Creohex; R. A. S. W.; radium.	Case responded at once; ceased treatment for asthma at end of 2 months; no return of asthma.	Has successfully been operated upon and gone through two attacks of pneumonia and one of whooping cough.
7.....	F 73 y.	Severe asthma from age 4 to 12 y.; free from asthma until 4 years ago, when it again appeared following a cold and has remained active.	Creohex; R. A. S. W.; radium: U. V. rays to lungs.	Remarkable improvement from first. Was entirely free from asthma but still under treatment when she met with very severe accident, when asthma returned.	Case not cured, but much benefited.
8.....	F 26 y.	Double pneumonia at 10 y.; Intermittent asthma since 18 y.; pneumoconiosis; sinuses cloudy.	As in case 7.	Relieved entirely from the first but continued treatment for 5 months. Remained well for about 2 years, then had slight relapse.	
9.....	F 22 y.	Developed hayfever 5 years ago, which quickly turned to asthma; has persisted since; sinuses cloudy.	As in case 7.	Discharged at end of 6 weeks, clinically well.	
10....	F 46 y.	Hayfever for many years, which gradually merged into asthma, severe for past 7 years; sinuses cloudy.	As in case 7.	Entirely relieved of asthma within 2 weeks; has had 3 months' treatment; has remained free to present time.	

Case No.	Sex and Age	History of Patient	Treatment	Results	Remarks
11....	F 57 y.	Pneumonia 29 years ago; cough and asthma followed; for past year, asthma severe and almost continuous.	Creohex; R. A. S. W.; radium.	3 months treatment; then almost entirely free from asthma; had attack following severe mental strain, which was easily controlled; well since then.	
12....	F 72 y.	Hayfever for many years; mild asthma for past year; emaciated; weak heart.	As in case 11.	Discharged free of asthma after 4 weeks; no return to date.	
13....	F 61 y.	Asthma since preceding winter; difficulty in breathing.	Creohex; R. A. S. W.; radium; U. V. rays to lungs.	Some improvement.	Did not finish treatment.
14....	F	Developed a cough 18 months ago, which developed into asthma.	As in case 13.	Continued to show marked improvement as long as she followed treatment.	
14A.	F 68 y.	Bronchial asthma for over 20 years; severe pneumonia 2 years ago; confined to bed as hopeless and incurable.	Creohex; R. A. S. W.; radium; symptomatic remedies.	3 months treatment resulted in clinical cure. After 2 years, patient remains in good health and able to work.	
15....	F 63 y.	Developed asthma 12 years ago, following bronchitis; intermittent until an attack of influenza 10 years ago; since then continuous; sinuses cloudy.	Treated in hospital; as in case 13.	Returned home in good condition after one month's treatment. Discontinued treatment and relapsed.	
16....	F 25 y.	Bronchitis at 4 y.; Asthma since 7 y., with remissions; sinuses cloudy.	As in case 13.	Prompt response, but did not make complete recovery. Nasal operation with perfect result.	
17....	M 49 y.	Typhoid at 14, with shortness of breath since; had wheezing for past 4 y.; lung rales.	As in case 13.	Under treatment for 3 months; marked relief and resumed business.	
18....	M 42 y.	Severe asthma since 3 y.; continuous for past 10 years; cloudy sinuses; nasal mucosa congested; weak heart.	Creohex; R. A. S. W.; radium.	Immediate benefit; was practically entirely free from asthma during 14 months of treatment.	Died suddenly from heart failure.
19....	M 42 y.	Asthma 8 years ago; sinus operation 2 years ago; squeaking lungs; cloudy sinuses.	As in case 13.	Treated for 3 months; considerable relief; stopped treatment.	
20....	M 80 y.	Asthma for 20 years following pneumonia; dilated heart; lung rales.	Creohex; R. A. S. W.; radium.	Treatment interrupted after 6 weeks. Experienced marked relief, which persistd for 2 years.	
21....	M 45 y.	Slight asthma for the past year.	Creohex; 4 radium applications to sinuses.	Condition completely relieved.	
22....	M 32 y.	Asthma since age of 3; deviated septum remedied 10 years ago; sinuses cloudy.	Creohex; R. A. S. W.; radium to sinuses and nose; U. V. rays to chest.	After 5 months treatment was practically free from asthma. Remains well.	

Case No.	Sex and Age	History of Patient	Treatment	Results	Remarks
23....	M 58 y.	Asthma for 20 years; lung rales; cloudy sinuses.	Creohex; R. A. S. W.; radium to sinuses; U. V. rays to lungs; symptomatic remedies.	4 months treatment with steady improvement; then discontinued for 6 months; resumed; better than ever before, but not completely well.	
24....	M 67 y.	Asthma for 20 years, recently very severe; lung rales.	Creohex.	Responded immediately; clinically free from symptoms after 2 weeks.	Subsequent history unknown.
25....	M 51 y.	Developed asthma about 2 years ago following business troubles; bronchitis; headaches; sinusitis.	Creohex; R. A. S. W.; radium to sinuses.	Condition cleared up in 8 weeks.	
26....	M 57 y.	Asthma symptoms for about 25 y.: acute for past 2 y.	Creohex; R. A. S. W.; radium.	Entirely free from asthma after 3 weeks' treatment.	
27....	M 34 y.	Asthma for 12 years past following attack of pneumonia; wheezy lungs.	Creohex; R. A. S. W.; U. V. rays and radium to lungs.	Treated for 3 months. Discharged clinically well.	
28....	M 46 y	Wheezing in lungs, following exertion, for past 2 years.	3 applications of radium and 4 injections of Creohex.	Was so much relieved that he did not return for further treatment.	
29....	M 68 y.	Severe asthma for 37 years; had several operations for polyps; sinuses cloudy.	Polyps (nasal) removed; Creohex; R. A. S. W.; radium.	Complete relief after 3 weeks' treatment.	
30....	M 48 y.	Asthma for past 3 years following a cold; cloudy sinuses; wheezing lungs.	Creohex; R. A. S. W.; radium.	Marked relief after 10 treatments. Has remained well.	
31....	M 55 y.	Asthma for past year following a cold; lung rales; deviated nasal septum; all sinuses cloudy.	As in case 30, with. U V. rays to lungs.	Treated for a year, then stoppel treatment; refused operation for septum; much better but not completely cured.	
32....	M 60 y.	Severe asthma for past 10 years; weak heart; squeaky lungs.	As in case 30.	Complete relief from asthma; died from cerebral apoplexy.	
33....	M 65 y.	Tic douloureux for 40 years; bronchial catarrh and nose trouble for many years; asthmatic spasms for past year.	As in case 30.	Completely relieved from start. Has remained well.	
34....	M 35 y.	Hay fever 18 years ago which, after 2 years, merged into asthma, lung rales; nasal mucosa much congested.	As in case 30.	Complete relief from first treatment. Discharged after 4 weeks; has remained 100 percent relieved.	
35....	M 55 y.	Catarrh of nose since boyhood; asthma since; operated for nasal septum trouble and tonsils.	As in Case 31.	Marked relief after 4 weeks' treatment; then discontinued; symptom-free.	Case not followed up.

Case No.	Sex and Age	History of Patient	Treatment	Results	Remarks
36....	M 49 y.	Asthma since babyhood, recently very severe; anemic; weak heart; wheezy lungs.	As in case 30.	Treated for 8 weeks; entirely relieved and has continued so.	
37....	M 61 y.	Severe cold about year ago, followed by asthma; anemic; weak heart; all sinuses cloudy; calcified gland in lung.	As in case 30.	Entirely free of asthma after 6 weeks and has remained so.	
38....	F 15 y.	Always subject to colds; asthma since age of 5, which persisted; anemic; congested lungs; cloudy sinuses.	As in case 30, with general tonics.	Discharged after 3 months' treatment, well and strong; free from asthma.	

Haddon Hall,
Commonwealth Ave. & Berkeley St.

A New Method in Gastrostomy*

By Herbert J. Wing, M.D., Chicago, Ill.

THE term, Gastrostomy, was coined by Sédillot[1] who, in 1849, first performed the operation on a human being. His second case, in 1853, died of peritonitis, as did the first. Previous to these two attempts, Egelberg[2], a Norwegian military surgeon, in 1837 advocated the operation in cases of stricture and diverticulum of the esophagus. He did not, however, perform the operation himself.

In 1842 and 1843, Bassow[2], in Russia, and Blondlot, in France, experimented with gastrostomy in dogs, for the purpose of studying the physiology of digestion.

Thirty-two (32) successive deaths occurred before the first successful gastrostomy was performed on man by Sidney Jones[1], in 1875. Verneuil, in 1876, succeeded in performing the operation with good results, using a modification of Sédillot's method. By 1884[2], 207 cases of gastrostomy could be collected and 189 additional cases were collected by Ashhurst[3], in 1897.

At the present time, many hundreds of successful cases might be reviewed, with the finding of large variations in technic. Each new operation and each modification must have been devised with some definite end in view, so let us consider some of the reasons why improvements were so earnestly sought.

Previous to the institution of aseptic surgery, infection was probably the greatest cause of failure, and peritonitis is at present not at all uncommon, even with the most careful technic.

A consideration of the most common methods of gastrostomy[4] reveals that each is subject to at least one of three disadvantages: (1) leakage and its sequelae; (2) the necessity of a constantly-worn tube or difficulty and danger in its reinsertion; (3) closure of the fistulous tract should the tube be left out, with relative difficulty of instrumentation through the fistula. Thus it may be seen that each new procedure devised strove for perfection, from the standpoint of both patient and surgeon.

The disadvantages of gastrostomy are constantly brought to mind when such an operation is indicated, and indeed, the indications are numerous[5]. We may consider collectively, any obstructing lesions of the esophagus or cardiac orifice and malignant tumors of the larynx involving the upper end of the esophagus, as well as those in the mouth and pharynx, interfering with

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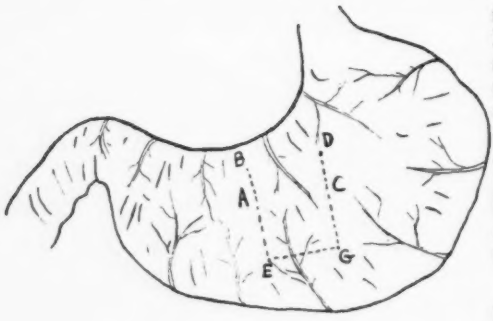

Fig. 1

swallowing. In addition, prophylactic gastrostomy[6] has been advocated in acute gastric dilatation, high paralysis of the small intestine, certain cases of perforated ulcer of the stomach or duodenum and cases in which gastrojejunostomy would be performed, but the patient's condition contraindicates its application.

In 1929, Spivack[1] published an entirely new idea in gastrostomy. He uses a fold of the gastric wall and mucosa as a valve, permitting tube feeding and instrumentation at will, but preventing any return flow or leakage, even during straining or vomiting.

Spivack's Technic

The anterior wall of the stomach is exposed and a flap outlined in the sero-muscular layer, about 2½ inches long and 2 inches wide (Fig. 1, B A E G C D). Points A and B, also C and D, are approximated by separate sutures and a probe or forceps laid in the resulting fold, underneath the two points approximated. The two edges of the cleft thus formed are then joined together above the forceps, by a sero-muscular, continuous stitch (Fig. 2). This fold later forms the valve.

The line A E G C is then incised through all layers, holding the corners of the flap up by means of Allis clamps. The result is similar to Fig. 3. Point F is then grasped and pulled downward. Points A and C (Fig. 3) are brought together with a stitch and the opening left in the form of a line, AC-F, closed by over-and-over stitches. Point B and D are brought together and the resulting line, BD-AC, when sutured, completes the tube. Point F may then be inverted by means of a purse-string suture, and the entire suture line covered by right-angle, sero-muscular stitches. The result is a tube with a valve at the base, and the entire field of operation is peritonealized. (Fig. 4).

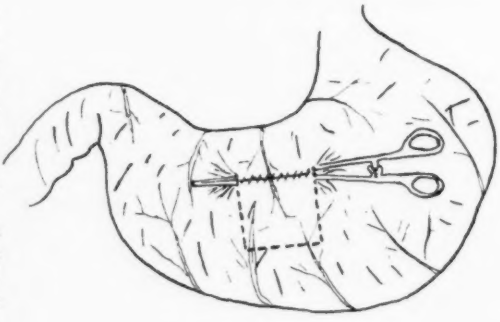

Fig. 2

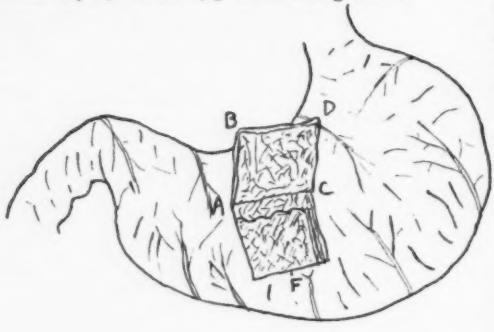

Fig. 3

The stomach at the base of the tube is sutured to the peritoneum at the upper end of the abdominal incision and the peritoneum is closed. Closure of the abdominal wound must be done with great care, lest the tube become twisted in its course.

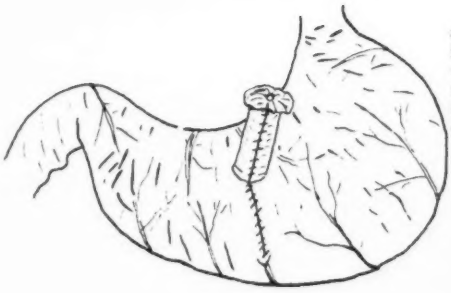

Fig. 4

Case Report

A white male patient came to our office complaining of occasional choking spells while eating. After questioning and examination, he

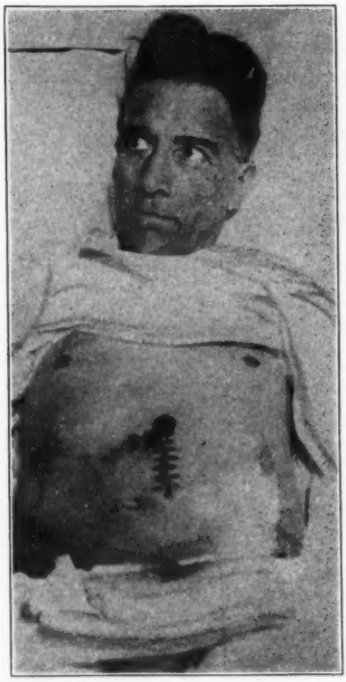

Fig. 5.—Appearance of wound 8 days after operation.

was given a mild sedative in a mixture containing belladonna. No results were obtained, so dilatation of the esophagus was done on three different occasions. The patient was not seen again until his return about four weeks later. His decline had been exceedingly rapid and he entered the hospital with the following complaints:

Inability to swallow solid foods; vomiting after eating; loss of twenty-five pounds weight in two months; weakness; occasional dizziness; dyspnea on slight exertion; pain in the lower sternal region; and occasional fresh blood in the vomitus. Previous to the sudden onset of dysphagia he had been feeling perfectly well.

Fig. 6.—Appearance one month after operation.

Physical examination revealed little except emaciation and a soft, systolic murmur at the apex, which was transmitted to the axilla. A diagnosis of carcinoma of the lower esophagus was made, but esophagoscopy revealed no stricture or new growth in the esophagus. Analysis of the gastric contents showed absence of free HCl; total acid, 3; many bacteria; fresh blood and several pale shreds which, when sectioned, proved to be small pieces of carcinomatous tissue. A trace of albumin was found in the urine and the blood examination revealed 50 percent of hemoglobin, 2,490,000 erythrocytes and a normal differential and white count. The Wassermann and Kahn tests were negative.

Blood transfusion was done, with some slight improvement, and since the diagnosis had been changed to carcinoma of the cardiac end of the stomach, operation was decided upon. A few days later, another tranfusion was done, followed by laparotomy.

The carcinomatous mass was found to be about the size and shape of a small lemon and completely encircled the cardiac orifice. No evidence of metastasis could be found, so a Spivack

gastrostomy was done. There was no postoperative shock or nausea. Rectal feeding, which had been started three days previous to the operation, was continued (6 ounces of 5-percent dextrose in isotonic salt solution every four hours, by retention).

On the second postoperative day, tube feeding was started through the new stoma, using four ounces of a solution of dextrose and water every two hours. The following day and thereafter, feedings were given every two to three hours between 8 A.M. and 10 P.M. The diet included water, dextrose, milk, eggs, gruel and broth. Fruit juice and whiskey were given twice daily. Small swallows of water were given at intervals, but were usually returned, mixed with frothy mucous.

A vaseline dressing was kept over the stoma and the skin clips were removed on the eighth day. The patient left the hospital on the eleventh postoperative day, walking. He was given equipment and directions for feeding himself, which he now does without any difficulty. A small amount of mucous secretion was seen for several days, coming from the exposed gastric mucous membrane, but this gradually subsided. There was no irritation of the skin about the opening at any time and the mucous membrane readily healed to the skin margin.

It is interesting to note that there was no nausea or vomiting at any time following operation, and after the muscular soreness had disappeared, no sensation of pain was felt between or during feedings. One month after operation the patient returned to his work, but it is not known how long he will be able to continue it.

We have looked into the stomach at will, with a direct-vision urethroscope, and intend, in the near future, to insert radium needles directly into the mass. If at all satisfactory, the results of this procedure will be reported in a later paper.

Conclusions

The Spivack method of gastrostomy is a practical procedure and definitely overcomes the disadvantages of other methods for making a permanent or temporary gastric fistula.

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4753 Broadway.

Notes from the Southern Medical Associaton

Reported by George B. Lake, M.D., Chicago

THERE is no city in the country that can duplicate the piquant flavor of New Orleans, for, in spite of the fact that it has become infested with tourists and devastated by Volstead during the past twenty-five years, so that the inimitable French quarter is largely commercialized and denatured, there is still an exotic aroma about the place that makes one want to return to it. Now that they have a fine, commodious municipal auditorium, with modern conveniences, it seems a highly desirable place for conventions.

The twenty-fifth annual meeting of the Southern Medical Association was held there in November, 1931, and the days were uncomfortably hot and damp, but we all had a big time, for there is something about these southerners that makes one feel welcome and at home.

One of the most significant features of the meeting was the prominence given to psychic factors in disease. These were discussed and emphasized, not only by the psychiatrists, but by a number of prominent internists as well.

Exhibits

Having recently reported the much larger commercial exhibit at the International Postgraduate Assembly, there is little to be said about this one; but one new apparatus was shown here for the first time—the McKesson pneumatic oxygen tent, which does away with a motor and operates by the pressure of the gas in the tank. This seems a practical innovation, and they have made a rather attractive and useful piece of furniture out of it, as the picture shows.

There appears to be an unusually keen and active group of dermatologists in the South. Their section meetings are full of pep and they always turn out an interest-

Courtesy of McKesson Appliance Co.

Fig. 1.—McKesson Pneumatic Oxygen Tent.

ing scientific show, this year being no exception, but such an exhibit has to be seen to be appreciated. Dr. Wm. Engelbach, of New York, also had a very instructive endocrinologic exhibit which can scarcely be described.

One decidedly new idea was demonstrated by Dr. Thomas D. Moore, of the urologic department, The Polyclinic, Memphis, Tenn. — a device for making serial pyelo-ureterograms.

Pyeloscopy is impracticable in patients with thick abdomens, and single pyelograms, while valuable in diagnosing renal stone and tumors, hydronephrosis and other anatomic lesions, is useless for detecting normal and abnormal physiologic conditions, especially those of the ureter. The Cinex camera of Jarre and Cumming makes interesting serial peylo-ureterograms, but is elaborate and too expensive to be within the reach of most urologists. Dr. Moore has devised a simple attachment for the ordinary Bucky diaphragm, with which he can take three excellent serial exposures on a 14 by 17 inch film. The arrangement was described in detail in the *Journal of Urology* for August, 1931, and is illustrated in Fig. 2; while the kind of pictures he obtains is shown in Fig. 3.

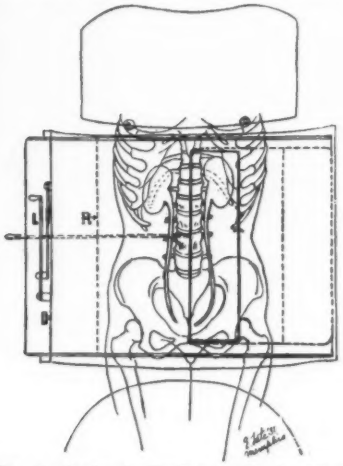

Fig. 2.—Device in Position in Bucky Diaphragm for First Left Pyelogram.

Fig. 3.—Normal Serial Pyelogram. (Note physiologic kink near the pelvis in second film, taken at end of inspiration, and suggestion of stricture of terminal ureter in last two films, which, however, is normal in the first film.)

ABSTRACTS OF SOME OF THE PAPERS AND CLINICS

FRACTURES OF VERTEBRAE

By H. Earle Conwell, M.D., Fairfield, Ala.

Chief, Orthopedic Service, T. C. I. & R. R. Hospital

A broken back used to mean severe and permanent disability, if not death, but we now have

methods of treatment which, especially if applied early, produce excellent results in these cases.

Fracture of several vertebrae is not uncommon and may be caused by direct or indirect violence. In the latter case, do not fail to look for fractures elsewhere, particularly those of the feet and ankles. We have seen several cases of spine fractures, where the os calcis also was fractured.

These patients must be treated for shock and *transported face down*. The x-ray studies must include *lateral*, as well as antero-posterior views. We must not call a patient with pain in the back a malingerer until a *complete* examination has demonstrated the absence of anatomic lesions.

Do not attempt the reduction of a vertebral fracture if the patient is in poor general condition. Treat a *man*, not merely a broken bone.

Operative fusion is indicated in some cases, but, as a rule, properly-applied extension, maintained for an adequate time, is sufficient. The patient should wear a traction collar and a cast for at least four months, and a brace for some time after that. We must be careful to avoid too-early sitting, walking and weight-bearing.

PRENATAL CARE

By James R. McCord, M.D., Atlanta, Ga.
Prof. of Obst. and Gyn., Emory Univ. School of Med.

Satisfactory prenatal care requires intelligent cooperation, on the part of the patient, and complete *willingness* to undertake it, on the part of the physician. A *complete* physical examination is necessary, as well as close and regular personal observation and consultation. *No short-cuts are possible.* A man must have an *obstetric conscience* to do it well. If State Medicine comes upon us, it will be our own fault, because the majority of the members of the profession are *unwilling to practice preventive medicine.*

We must discuss with the prospective mother the evils and dangers of meddlesome midwifery, the importance of letting a normal labor take its course without hurry and other matters which she should understand in order to approach her labor in good *psychic* as well as physical, condition.

If an intercurrent disease develops or is discovered during pregnancy, we should ignore the pregnancy and treat the disease on sound principles. Syphilis and tuberculosis are the great problems. A Wassermann test should be made on every pregnant woman and, if syphilis is found, it should be treated vigorously.

ABDOMINAL DIAGNOSIS

By J. M. T. Finney, M.D., F.A.C.S., Baltimore, Md.
Prof. Clin. Surg., Johns Hopkins Univ. School of Med.

A diagnosis of acute appendicitis is frequently made in cases of acute infectious disease, tabes, allergy, hip disease, psoas abscess, herpes zoster, angina pectoris, pneumonia, osteomyelitis of the head of the femur and other conditions. The confusion is greatest in the early stages, when an accurate diagnosis is most needed. Later the nature of the condition may become clear—perhaps when it is too late.

A surgeon without *judgment* is like a ship in a storm without a rudder. The laboratory will not take the place of clinical study and judicial weighing of the evidence. It is easy to become careless and slipshod and drift into routine methods.

Attention to detail is eighty percent of good surgery. It may cut down the volume of work a man can do, but, for the sake of his own conscience, he must do what he does *well*. The busy practitioner must keep abreast of the modern advances in knowledge.

The abdominal organs are closely associated in function and in nerve and blood supply. This makes differential diagnosis difficult. There is often trouble in distinguishing diaphragmatic pleurisy (especially on the right side) from appendicitis.

Appendicitis in children is quite different from the same disease in adults. It is insidious and rapid, perforation occurs early and there are relatively few pathognomonic symptoms and many atypical cases. It is frequently confused with acute infectious diseases, such as tonsillitis, influenza and measles. There is only one safe course to pursue—make a *thorough* examination of the *whole child, in every case.*

The management of these cases calls for *eternal vigilance*, with watchful waiting, guided by surgical judgment, if the symptoms are not alarming. If the condition grows worse, it is safer to operate promptly without waiting for an exact diagnosis.

Illustrative Cases

A physician, *who had had no recent complete physical examination,* developed attacks of "angina pectoris." Later he became jaundiced and a study of his abdomen revealed gall-stones. His "angina" was cured by a gall-bladder operation.

A woman of fifty years, *who had had no digestive symptoms* and was not neurotic, developed dyspnea and oppression. A diagnosis of "progressive myocarditis" was made and digitalis was prescribed. She was bedridden. Later she had typical gallstone colic and a gall-bladder operation relieved all of her "cardiac" symptoms.

A man of fifty-four years had been treated for biliary disease, by duodenal drainage, for seven years. One day, when he was carrying a heavy weight, he experienced sudden, severe epigastric pain with shock, and a diagnosis of "ruptured duodenal ulcer" was made. His leukocyte count was 22,000, with 98 percent polymorphonuclears. His condition improved, but in the hospital he suddenly collapsed and died. The autopsy showed *no abdominal lesion whatever,* but his *pericardium* was full of blood from a rupture of the left ventricle due to *infarct.*

In a certain family there were three children, two of whom became ill, with a suspicion of appendicitis, and developed measles. When the third child fell ill, little attention was paid to him, but he had a *perforated appendix.*

INDOLIC AUTOINTOXICATION

By J. Russell Verbrycke, Jr., M.D., F.A.C.P., Washington, D. C.

Indolic autointoxication is the absorption of chemical poisons from the bowel contents, with the appearance of indican in the urine.

The symptoms are easy fatigability, dizziness, headache and other effects on nerves and muscles. When the condition is unusual for the patient, malaise is marked; but in chronic cases a tolerance is gained. Pressure in the rectum may cause the same symptoms.

The causes seem to be decomposition of proteins by putrefactive bacteria or the secretions of the colon; excessive fatigue; or emotional upsets. Worry over the condition itself (if it is known to the patient) may maintain it; therefore we must reassure the sufferer.

Constipation and autointoxication are *independent of each other.* In fact, absorption of toxins is greatest when the stools are liquid; and autointoxication may be present with normal stools.

If the cause is chiefly emotional, a *real vacation,* without any special diet or medication, will sometimes work a cure. Otherwise the treatment is dietary, bacterial and chemical. No diet, alone, is curative, but it is well to reduce the protein.

Bacillus acidophilus and *B. bulgaricus* are useless, as they are not normal inhabitants of the colon; but some help comes from instilling, through a colon tube, enormous numbers of carbohydrate-fed *B. coli.* This process is, however, complicated and expensive.

Phenol salicylate (salol) and the sulphocarbolates are of little value; but the results from the use of *Dihydranol* seem encouraging, though the drug is expensive. Indican disappears from the urine slowly and does not reappear.

PSYCHOTHERAPY IN GENERAL PRACTICE

By W. R. Houston, M.D., F.A.C.P., Augusta, Ga.

Chairman, Section on Medicine

The general practitioner tends to feel that psychotherapy savors of charlatanry and fights shy of it. This is not strange, in view of the recent great advances in mechanistic medical science.

Every successful practitioner is, more or less, a psychotherapist, and his success is largely in proportion to his skill in this line, though he may not be a formal psychologist. More than half of the ambulatory patients we see have no organic lesion, and the physician who discards psychotherapy from his armamentarium is constantly in trouble. It is as bad to overlook a neurosis as it is to invent lesions to explain it. We have a tendency to work out a complicated mechanistic explanation, when a psychic explanation is perfectly simple.

Psychology is a vital part of biology. We must study the *whole man.* Virchow taught organ pathology. Then we had the great field of physiologic and functional pathology. Our study of biology in relation to medicine has followed this course: (1) somatic organs; (2) endocrines; (3) the autonomic nervous system; (4) psychology. All these are closely united and must be studied together.

Psychotherapy is not the same as Freud's psychoanalysis, which is applicable only in rare cases. *Even Freud does not use it at home.* Christian Science is better, in most cases, than Freud's methods.

Psychotherapy is not confined to psychiatrists. The psychoneurotic patient requires more careful attention than does the one who is frankly insane. We must let these patients talk about themselves freely, and not spend all the time preaching to them.

It is as reprehensible to deny intelligent treatment to these patients with incipient psychic disease, as it would be to refuse to give careful attention to a man with incipient tuberculosis.

Cases requiring psychotherapy *alone* are rare. Drugs and other physical methods are generally needed. We study and use electricity without knowing what it is. Why not do the same with the *life force,* as it manifests through the human psyche?

Our problem is to help men adjust themselves to the circumstances of their immediate environment, and this is becoming more and more important. We must not neglect the physical examination, but must give more time and attention to the things of the spirit.

Psychotherapy is teachable and learnable, but it requires *interest* on the part of the student, who must learn to *know men—himself first of all.*

The man who has no taste for and interest in this line of work should not undertake the clinical practice of medicine at all, but should confine his efforts to the strictly technical branches of medical science.

Toxic Reactions from Barbiturates

By Mark S. Dougherty, Jr. M.D., Atlanta, Ga.

The toxic reactions produced by the various derivatives of barbituric acid are: lethargy, stupor, coma, markedly lowered blood pressure, etc. There is no *necessary* relation between the size of the dose and the severity of the toxic symptoms, but in a very large majority of cases, such symptoms result from overdosage.

Certain patients do not bear the barbiturates well and soon develop addiction. Self-medication with these drugs is dangerous, and all patients for whom they are prescribed should be carefully watched for the appearance of untoward effects. Dr. Otis, of New Orleans, says that the picture of barbital addiction resembles that of paresis.

Pathology of the Personality

By Stewart R. Roberts, M.D., F.A.C.P., Atlanta, Ga.

The three great steps by which we have reached our present point of outlook upon disease are: cellular pathology, pathologic physiology and personality pathology. The physician who deals solely with the physical machine, by and through which a man functions, has a wholly inadequate view of his field and duties, although this is a widely-held conception of the scope of medical practice. The mind is one function of the personality and, for an intelligent understanding of a medical problem, must be considered, along with the physical body and the emotions. In the future, the medical man will probably examine the personality with more scientific care and attention than he now devotes to the urine, blood or heart.

A young woman suffered from periodic attacks of vomiting, coming on at irregular intervals of from two to six weeks. Physical methods failed to control these attacks. A personality study revealed that she had an insane father, and that every time she went to see him she vomited for three days afterward. She was advised to cut him entirely out of her life (since her visits gave him no pleasure), whereupon her attacks ceased entirely.

"Nervousness" is a large clinical problem and embraces far more than the mere objective symptoms of instability. A great forward movement has been made in psychology during the past few years, but it is only beginning to overflow into medical practice. The modern pressure of life is making personality studies more and more necessary.

There is a definite pathology of the personality. The *size* of an event does not depend upon its character, but upon the individual's reaction to it. It is possible to *manipulate the personality,* as a surgeon manipulates an appendix, but in doing so the physician must have and use a large fund of sympathy and common sense.

The three great types of inadequate reaction to one's environment are: (1) to leave it entirely—to "check out," by sui-

cide or disappearance; (2) to develop symptoms of physical illness, in order to escape from duties and responsibilities; or (3) to turn the consciousness inward to phantasy and brooding.

Any internist can treat the physical body, but the *great* (sensitive) ones treat the soul also, remembering that *anything that cures the patient is scientific.*

The Unstable Colon

By John L. Kantor, M.D., New York City

The same bowel may show variations in various parts or at various times—atony with stasis and hypermotility with spasm, producing alternating constipation and diarrhea.

The healthy colon empties slowly (in about 48 hours), with about one stool in 24 hours; though "normal" evacuations may vary from once in 48 hours to several times a day. Both physical and *emotional* factors may cause constipation. Normally the bowel *compensates*, a period of constipation being followed by diarrhea, and vice versa.

Instability of the colon is a very common condition. General nervous instability and psychic upsets are prominent factors in many cases. A constipated patient may still have colitis. There is always danger that the patient may form the cathartic or enema habit and become acutely belly-conscious.

Man has no ferment in his digestive canal to break down cellulose, so this must be done by bacteria. Too much roughage may overtax the powers of the colon. Bran may be detrimental, even to normal colons; so may raw milk, sometimes, though processed milks ordinarily do not cause irritation. Intestinal allergy must always be considered. It is now possible to increase the intake of vitamins without increasing the roughage.

There are many popular misconceptions as to the function of the colon, among them these: (1) that the colon is merely a sewer; (2) that mushy stools are normal; (3) that going for a day without a stool is dangerous; (4) that the rest period after a purge is constipation; (5) that the best treatment for headache and malaise is a purge or an enema, etc. Because of these false notions, many people become cathartic addicts.

The symptoms of unstable colon are belly-consciousness—the normal movements of the intestines coming, abnormally, into the field of consciousness—and pain. The condition runs a long course and many misdiagnoses are frequently made. Removal of the appendix has no good effect in colon cases, the use of cathartics makes things worse and caffeine is detrimental. A *diagnosis* is made on the history, stool examination and x-ray studies.

The *treatment* consists in reestablishing the normal bowel function. Withdraw all cathartics, as one would withdraw a narcotic from an addict. We need to *encourage* these patients and *secure their cooperation.* Psychotherapy and reassurance, at the time of the x-ray studies, are vastly helpful. Give sedatives—belladonna, codeine—cut out the roughage and regulate the diet so that it contains only bland, unirritating foods. Iced foods and drinks are always bad when irritation is present.

Barium salts can well replace agar, if needed, giving one or two tablespoonfuls a day, in water. Mineral oil may be given by mouth and a heavier oil as an enema. Liquid stools *always*, and mushy stools often show that too much cathartic is being given. The bowel habits must be corrected.

The keynotes of treatment are *reassurance, relaxation and reeducation.*

Obscure Fever in Children

By Benjamin Bashinski, M.D., Macon, Ga.

Most children are referred to a pediatrician because of obscure fever. No examination is satisfactory unless the patient is nude. Laboratory studies are indispensable. A careful uranalysis clears up many cases, and the otoscope others.

The commonest cause of obscure fever is pyelitis, and otitis media is next. In the latter condition, pain is not always present, but violent nausea and vomiting may be prominent features.

A complete blood count should be made, and the presence of leukocytes *rules out* tuberculosis (except meningitis), influenza, typhoid and paratyphoid fever and malaria. Not every child with low-grade fever has tuberculosis (commonest in the glands and bones). An infant does not have a rigor with malaria, but becomes cyanotic around the mouth. Influenza is severe in infants, but is hard to diagnose.

Infected sinuses, abscessed teeth and pyelitis will show leukocytosis. Sinus disease is common in young children, especially in the maxillary sinus after influenza,

pneumonia and scarlatina. Infected sinuses cause trouble almost as often as tonsils and adenoids. A constant nasal discharge is suggestive of this condition.

Copper and Iron in Infancy

By Allan P. Bloxsom, M.D., Houston, Tex.

In most infants the hemoglobin percentage is lower than in adults (65 to 85 percent, averaging about 75 percent), and is lowest at the age of about two years. There is no copper in human or cow's milk, and only very little iron in the latter.

Each of a group of 57 apparently normal infants was given 1 mgm. of copper sulphate and 10 mgm. of iron and ammonium citrate, in solution, daily, and presently their hemoglobin average was found to be 15 percent higher than that of 100 similar infants who did not receive the copper and iron. The fall in the hemoglobin, at the ninth to twelfth month, was neither so great nor so prolonged. Moreover, their appetite and color were better.

Copper is more effective than any other metal which has been tried with iron for increasing the hemoglobin. This is in accord with experimental results in animals.

A Modified Gerson Diet for the Treatment of Tuberculosis

By F. D. La Rochelle, M.D., Springfield, Mass.

DURING the last few years a number of articles have appeared in the German medical literature advocating the diet treatment of tuberculosis, by Gerson, Sauerbruch and Hermansdorfer, and also from the Danish physician Hindhede and others. In this country also a number of papers have been written, but with less emphasis on the principles advocated by Gerson. In Germany this diet has been discussed in congresses and has been given large publicity in the lay press and radio addresses, so that medical men, and the public as well, have ranged themselves into two well-defined groups, one offering the Gerson diet as a cure-all for all forms of tuberculosis, while the other judges it worthless and maintains that the results obtained (and these are admittedly good, especially in skin and bone tuberculosis) are due to the cod-liver oil and vitamins in the diet.

This extensive literature[1] has been reviewed from month to month in the *Zeitschrift für Arztliche Fortbildung* and, on page 349 for 1930, Gerson himself, in a resumé of a radio address, expounds his views relative to diet treatment of tuberculosis. He calls attention to the well-known fact that the Hippocratic writings considered diet of great importance in the treatment of all diseases, and even to the time of V. Leyden and Sydenham, diet was considered basic and medicines an accessory in the treatment of disease. It is only in the last 50 years, as a result of rapid development of pharmaceutical sciences and modern publicity methods, that diet has been pushed into the background and replaced by medicinal extracts and synthetic drugs, put up in convenient packages with indications that make it easy for the physician to practice medicine with pad and pencil. Gerson remonstrates against this short cut vehemently, and scientific developments of recent years, with the socalled dietary diseases, would seem, not only to confirm his views, but to suggest that diet may play a greater part in other diseases than we have been led to suppose.

Briefly, the Gerson diet consists of limiting proteins to 45 to 50 Gm. daily; reduction of carbohydrates; pushing of fats, especially butter and other lipoids, with large amounts of fruits and green vegetables especially spinach and fruit juices; and reducing the salt intake to a minimum. In addition to this, Gerson advocates all other adjuvant treatments that experience has proved worth while.

On February 28, 1930, at a meeting in the *Kaiserin Friederich Haus*, with Gerson, Sauerbruch, Hermansdorfer and Hindhede participating, a committee concluded that the Gerson diet was of definite benefit in bone and skin tuberculosis, but reserved judgment in regard to pulmonary tuber-

culosis. This opinion was again affirmed during the latter part of the year and is reported on page 300, *Zeitschrift für Arztliche Fortbildung*, where it is definitely advised that the well-known and established methods of treating pulmonary tuberculosis should not be abandoned in favor of the Gerson diet.

More recently, Gerson has published a book describing his diet for tuberculosis and other dietary indications, and objection has been raised to it because he selected a lay publisher. Other books have followed and now there is an abundance of works in German dealing with the so-called Gerson, Sauerbruch or Hermansdorfer diet, with innumerable modifications.

While Gerson's indications, in the main, are simple enough, his menu is bewildering and, with this in mind, I have aimed to simplify it and put it on a practical basis, so that any practitioner may avail himself of his indications. A number of modifications have been made, based on well-established facts in the diet treatment of tuberculosis.

Modified Gerson Diet

The patient is given instructions like this:

Every morning, mix two quarts of milk, one egg and two tablespoonfuls of chocolate Vitavose and drink this as you like during the day. You may add any other flavor you wish.

Breakfast: Eat your favorite cereal, with plenty of butter, one egg, two oranges and one cup of coffee or chocolate.

Noon: Eat mainly vegetables, especially the green, leafy varieties. You should have spinach at least three times a week.

Supper: Eat your customary diet and drink three ounces of grape juice.

Special: *Use no salt with your food.* Take cod-liver oil, either in liquid or tablet form. Get as much sunshine and fresh air as possible. If you do not get a satisfactory amount of sunshine, take an ultraviolet ray treatment once or twice a week. Keep your bowels open with psyllium seeds or other suitable laxative. You should be weighed once a week and *keep a record*. On this diet you should gain weight rapidly. If not, see your doctor.

As will be noticed, two quarts of milk, with an egg and Vitavose are to be taken daily. This is nutritious, contains an abundance of vitamins. Vitavose is a blend of wheat-germ, sugar and milk proteins. Two oranges are added to the first meal and at noon the patient is encouraged to depend largely on green vegetables, especially spinach. These furnish vitamins and also metals, including traces of copper[2] that have been found of value in secondary anemia. For the evening meal the patient is allowed to choose his fare and in addition, drink three ounces of grape juice. If he has taken the milk and vegetables, it is unnecessary to add that this meal will not be large. This is intended as the main treatment, but is not meant to exclude any other measures that may be indicated.

My experience with this diet has been favorable, and it is easy to carry out. Patients, as a rule, do not object too strenuously to going without salt, and they put on weight rapidly and gain added vigor. They may continue their usual occupations unless there are special contraindications. This treatment should be kept up at least six months and until the patient attains his normal weight.

While it is too early to give a definite judgment of this diet, it appears clear that Gerson has rendered a service to Medicine in once again calling attention to the decisive importance of diet in health and disease and the error of making medicines the basis of treatment, except in those diseases for which we have a specific drug.

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Leaders with Vision

It is not the men who can make a million in a year who are fit guides in the present crisis, but those whose vision has been rendered clear by the clouds overhead.—Editorial in Med Times (*London*).

Tonsillitis and its Sequelae*

By Isadore Pilot, M.D., Chicago, Ill.

IT WOULD appear, perhaps, superfluous to take up a simple subject like tonsillitis, and yet, as a result of studies made in the past two years, some interesting phases of sore throat have developed that may throw more light on the mechanisms of the sequelae and result in more careful observation and treatment of the patient.

Next to "colds," tonsillitis is the most common cause of illness of an acute nature, and it more often leads to complications. Endocarditis, nephritis and arthritis are so often preceded by sore throat, that any great progress in the control or prevention of these conditions will depend on studies on the epidemiology of tonsillitis and the pathogenesis of its sequelae.

Streptococcus Epidemicus

Bacteriologic examinations of patients with sore throat and many upper respiratory infections yielded hemolytic streptococci in swab cultures of the tonsils or pharynx. These organisms frequently appeared in pure culture or predominant numbers. By the use of a special medium, consisting of ascites fluid added to infusion-blood-agar, we were able to identify the *Streptococcus epidemicus*, a variety of hemolytic streptococcus previously found only in connection with epidemic, milk-borne septic sore throat, but now, in our sore throat studies, recovered in 10 per cent of sporadic cases of sore throat[1].

This organism is readily followed in a study of the bacterial flora of the throat during active tonsillitis, convalescence, and when complications occur. The observations made with this organism were also noted with other hemolytic streptococci. Tonsillitis due to hemolytic streptococci has a seasonal variation resembling scarlet fever. Most cases were observed during the winter and spring, few in the summer and moderate numbers in the autumn. Our patients were of all ages. Small epidemics unrelated to milk were observed in hospital wards and in an orphans' home. It is needless to go into detail on the clinical manifestations and course of tonsillitis. I wish, however, to emphasize certain features and variations in the clinical picture.

The Clinical Picture

Sore throat due to the streptococcus may exist with little fever, or the rise of temperature may be as high as 107°F., with corresponding variations in the general toxic symptoms. It is, indeed, remarkable how mild the infection may be. We observed red throats, with pure cultures of hemolytic streptococci, in patients who were ambulatory. These patients are particularly dangerous in the spread of tonsillitis by droplet infection.

Another interesting feature is the streptococcus infection in tonsillectomized persons. Instead of a marked sore throat, as in tonsillitis, the patient presents a raw throat and symptoms like those of an upper respiratory infection. Indeed, if one did not make cultures, the condition would readily be diagnosed as a "cold" with bronchitis, or as influenza. A disappointment has been the realization that tonsil removal, which may reduce the incidence of sore throat, does not prevent streptococcal infection of the oro- and naso-pharynx.

During the primary stage, in the first week, complications may occur. A severe type of septic sore throat is one in which the patient is immediately overwhelmed by a streptococcus septicemia. While such have been observed in the epidemic form, fortunately they appear rarely in the sporadic form. More commonly, cervical adenitis, otitis media and mastoiditis or peritonsillar abscess may develop, and the hemolytic streptococcus may be found in the complicating lesion. It is unnecessary to dwell on this point any further, as these complications are expected in this stage.

Most unexpected and annoying is the development of symptoms in a patient apparently recovered from the acute primary stage. At a period of 10 to 30 or more days after the onset of the sore throat, a recurrence of the tonsillitis may develop. The tonsils, instead of having grayish-white spots, as in the first stage, appear reddened, edematous and, as a rule, devoid

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*Presented at a meeting of the Medical Round Table, Sept. 8, 1931.

of exudate. Fever may recur, although not so high as in the primary stage. With the recrudescence of the throat symptoms, otitis media, mastoiditis, cervical adenitis or peritonsillar abscess may develop as complications. In the exudate of these lesions the streptococci are, as in the primary stage, similar to those found in the swab cultures of the throat.

The occurrence of lesions two weeks or more after the initial infection, has suggested the possible role of allergy or hypersensitiveness to streptococci developing during this period. Most striking, at this time, is the development of symptoms referable to the joints, heart, kidneys and skin. A polyarthritis that is like the acute rheumatic type may arise, involving the knees, ankles, wrists, elbows and other joints. The findings vary from marked pains with no swellings to distinct evidence of inflammation, such as warm, swollen, tender joints. Such arthritis may continue for from two to ten weeks. If cultures are made from the throat, the hemolytic streptococci may be found in abundance; but blood cultures, excepting in two of our cases, were sterile. In the two instances, hemolytic streptococci isolated from the blood were identical with those from the throat.

At this stage, clinical evidence of endocarditis may develop and resembles, apparently, also the rheumatic type. The appearance of nephritis is similar to that observed as a sequela in scarlet fever. As a rule, albumin and red cells appear in the urine, indicating a glomerular lesion. All of the cases we have observed were mild and recovered.

Erythema nodosum was noted in three instances, associated with sore throat due to *Streptococcus epidemicus*. The lesions were typical in location on the legs and in their clinical behavior.

A noteworthy feature is the development of arthritis, nephritis and erythema nodosum, in patients whose tonsils were absent. In the tonsillectomized patients, the hemolytic streptococci may remain for several weeks—long enough to be the source of such complications in late convalescence. Such individuals, however, do not become permanent carriers of the streptococci.

A sore throat may clear up, either from the acute or recrudescent stages, and then become a chronic ailment. The tonsils remain enlarged and purplish red and purulent exudate may be expressed from the crypts. This stage is determined by the persistence of the originally responsible hemolytic streptococci. In other words, the patient becomes a carrier and harbors the organisms in the crypts of the tonsils and often, also, in the adenoid tissues of the nasopharynx. The tonsils and adenoids are now to be regarded as foci of infection. As foci the tonsils may show little evidence of infection or marked exudate formation in crypts or abscess. From such tonsils the streptococci, from absorption in small numbers, or the toxins, may be carried to joints, endocardium or kidneys, and lead to arthritic pains or arthritis, endocarditis or nephritis of a subacute or more chronic nature. While histologic examinations of the tonsils removed from such patients revealed evidences of inflammation, the changes were no more marked in these tonsils than were also observed in excised tonsils with similar bacterial flora from patients who, however, had no arthritis, etc. Such findings presume that, not only a focus and streptococci are necessary, but also that an underlying *hypersensitiveness of the tissues* may determine the joint or heart involvement.

Streptococcus Carriers

Most important is the role the carrier of these streptococci may play in the dissemination of sore throat. Such persons undoubtedly are responsible for the development of sporadic cases of sore throat. Occasionally, on a dairy farm, a carrier may infect an udder of the cow, which results in mastitis. The milk from such cows, if not pasteurized, may be the cause of an extensive epidemic of septic sore throat. Indeed, when such epidemics develop, a proper investigation will often disclose the *Streptococcus epidemicus* in throat cultures of patients, and the same streptococcus in the milk from a cow with mastitis. Often it is possible to find carriers among the milkers. In such epidemics, the boiling of milk or the exclusion of the cow with mastitis leads to prompt cessation of the epidemic.

At this point I would like to speak of our work on these carriers. It is remarkable how often the carriers have arthritic pains or arthritis. The simplest treatment to terminate the carrier state consists of the removal of the tonsils. The hemolytic

streptococci promptly disappear in almost all patients, in from one to twenty days. With the disappearance of the streptococci from the throat, there is an improvement or often striking relief from the arthritic pains. This has been our experience in 23 patients with arthritic symptoms, whose tonsils harbored *Streptococcus epidemicus.*

With reference to treatment in the acute primary stage of tonsillitis, it is needless for me to go into details on the management. A mild alkaline gargle, salicylates and rest in bed are usually sufficient.

More important, on the basis of our studies, is the possible prevention of a recurrence of sore throat with possible complications in the joints, heart, etc. We cannot predict which patient will make a complete recovery and which will develop complications. Few studies to determine susceptibility to complications have been made. If a throat remains red and the hemolytic streptococci are still present in abundance, such patients should be kept in bed longer and watched carefully for complications. Persistence of slight fever, tachycardia and cervical adenitis are indications of potential danger.

When complications develop during convalescence, there is little to be done besides symptomatic management. One should not neglect treatment of the throat, which we will find still harbors the virulent streptococci. Mild antiseptic gargles or local treatment should be given at this stage, in the hope of influencing the absorption of the streptococci or their toxins. After an interval of from five to six weeks following the subsidence of the acute manifestations, the tonsils should be removed, in order to cause disappearance of the streptococci and prevent further recurrence.

Epidemic, milk-borne tonsillitis can be eliminated by proper enforcement of pasteurization. The sporadic and endemic types are still prevalent and uncontrolled. Isolation of active cases is of course necessary, but the proper control will not be possible until methods are developed to determine what persons are dangerous carriers of hemolytic streptococci, what persons are susceptible to tonsillitis and how such persons can be immunized by such procedures as are being carried out in the control of diphtheria and scarlet fever.

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Calcium in Acute Inflammatory Conditions

By Edward Podolsky, M.D., Brooklyn, N. Y.

THE treatment of inflammation is always based on the stimulation of the natural defensive processes of the body, whether it calls on substances specific for the particular causal agent or on others which have a general, unspecific, action on tissues.

It is obvious, *a priori,* that an effective, really specific treatment represents the highest goal desirable, but, despite the tremendous amount of work done on serums and vaccines, one must confess that we have such specific treatment at present in only a rather limited number of diseases. It makes necessary an accurate knowledge of the causal agent and adaptation of the product used to combat it.

Unspecific general therapy does not have such exacting requirements, therefore it is readily available in many cases in which determination of the causal agent takes time, which means delay; and, clinically, this unspecific therapy has been found really useful and effective. Many drugs have been tried; many have not come up to expectations; others have.

The main objects sought are:

1.—To *stimulate phagocytosis.*

2.—To *decrease the exudative processes* connected with inflammation, whether infectious or of external irritative origin.

3.—To relieve pain. It is quite often forgotten that relief of pain in an inflammatory lesion is not simply and necessarily a *result* of improvement, but may be a *cause* of improvement.

Work done in recent years on calcium shows it to effect those three desiderata and, therefore, to be well adapted to the treatment of inflammation.

Physiologic Effects of Calcium

Calcium stimulates phagocytosis. This fact was demonstrated some years ago by

Hamburger[1] and de Haan. Recently Tunnicliff[2] investigated the influence on phagocytosis of a number of substances, such as sodium salicylate, neoarsphenamine, calcium chloride and calcium gluconate*. This latter salt was studied in greater detail, on account of the favorable clinical results with its use in gonococcal infections reported by Herrold[3] and others. It was found to produce, in rabbits, a high degree of phagocytosis, when given either by intravenous or by intramuscular injection, intravenous injections acting twenty-four hours earlier than intramuscular. Clinically, a high degree of phagocytic activity was obtained in a man with intravenous injections of calcium gluconate, followed by intramuscular injections and finally by the use of the drug by mouth. With its discontinuation, phagocytosis returned to normal.

2.—That *calcium reduces cell permeability and transudation phenomena* is well known since the fundamental work of Loeb. Sodium, on the other hand, increases cell permeability. Blum[4] contends that calcium diminishes the sodium of the blood and prevents it from passing into the inflammatory area, thus checking the development of edema.

Januschke[5] demonstrated that the typical inflammatory reaction produced by an irritant like mustard oil was prevented by the previous administration of calcium salts. Rosenow thinks that calcium acts in the same way as adrenalin (epinephrin) in preventing the formation of inflammatory exudates. Gold[6] found that pleural effusions, produced experimentally by the use of copper sulphate, were favorably influenced by the administration of calcium. Rothlin, using the same method, observed a definitely lower exudation in animals to whom calcium gluconate had been administered as a prophylactic measure. The negative findings of Tainter[7] with calcium, in the prevention of the inflammatory dermatitis caused by paraphenylen-diamine, have not received confirmation from other sources.

Finally, calcium moderates neuromuscular excitability and relieves pain, especially that due to spasm of smooth muscle, as shown by Bauer, Salter and Aub[8]. It also contributes in checking hemorrhage of the capillary oozing type which is frequent in inflamed surfaces.

*Calcium Gluconate—Sandoz, now named Calglucon. (see N.N.R.), was used.

All this explains the clinical results obtained by the use of calcium in various inflammatory conditions.

Clinical Applications

The acute inflammations for which calcium has heretofore been most used are those of the urinary tract and of the skin. Cerf, Leff and Spencer, Rupel[9], Herrold[3], Pelouze[10] and others have applied it to the treatment of epididymitis. Pelouze[10] also obtained relief of symptoms and apparent improvement in the joint in cases of gonorrheal arthritis, with daily intravenous injections of 10 cc. of a 10-percent calcium gluconate solution for 4 or 5 doses. Herrold found that, in epididymitis, calcium gluconate proved superior to sodium iodide and foreign proteins, besides being less unpleasant to the patient. He found that, if enough was given, there was distinctly less permanent infiltration of the epididymis and that the chances for permanent obstruction of the vas and tubules would probably be lessened. This is an important factor as regards sterility when both sides are involved or in patients with repeated infections and complications.

Herrold gives routinely in such cases an intravenous injection of 10 cc. of calcium gluconate solution, first daily for 3 or 4 days; then one every other day; then one a week until about the end of the third week. An interesting point is that some of the patients who suffer from terminal hematuria at the onset of the epididymitis stop bleeding within 24 hours after the first calcium injection. A good influence is also noted on the general symptoms of acute gonorrhea and on prostatitis. Herrold reports also a case of severe iridocyclitis, caused by a prostatic focus, which was benefited by calcium therapy.

In acute salpingitis, Herrold has confirmed the good reports published by others for instance, Zalewski[11] and Boesken[12]. Zalewski, in about 200 cases of salpingitis, found that calcium gluconate was very effective. He prefers a procedure which combines calcium with autohemotherapy. The contents of an ampule is drawn into a syringe, the needle inserted into the vein and 10 cc. of blood withdrawn and allowed to mix thoroughly with the calcium solution. One-half of the 20 cc. of calcium gluconate and blood mixture is immediately reinjected into the vein, the needle withdrawn, and the other half injected intramuscularly.

Boesken found that calcium therapy did not yield greatly superior results to other methods in chronic cases, but that, in acute cases, in daily doses of 10 cc. of gluconate solution, it was unusually satisfactory, causing a sharp fall in temperature, cessation of pain and disappearance of large, palpable lesions. Convalescence was rapid in two-thirds of the cases, and improvement was noted in the remaining third.

In acute inflammations of the skin, whether infectious or of endogenous or exogenous origin, calcium gives marked relief from the pain, and especially the itching. The more acute the process, the greater the relief, as emphasized by Karrenberg[13]. Downing and Blumenfeld[14] have reported very good results from the use of Calglucon in dermatitis of chemical origin.

Finally, calcium, administered orally, intravenously and intramuscularly, has been used to accelerate resorption of inflammatory exudates, such as sero-fibrinous pleurisy (Oriani[15]; Thone[16]) and to decrease the secretions in pulmonary conditions, such as bronchitis and pneumonia.

To sum up: The question of calcium therapy in inflammations is not settled, but much is known and proves that:

1.—Calcium is not, strictly speaking, a specific in inflammation, but it promotes the defense of nature and relieves pain. Calcium must be considered, at least, as a general adjuvant of value.

2.—Large doses are always desirable, and often absolutely necessary to obtain results.

2.—The greater the inflammation, the greater the relief.

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166 Rockaway Parkway.

The Cost of Dentistry

We deny that dental service is costly. Uncle Sam pays an annual bill of five hundred millions of dollars for his soft drinks and a little more than half of that for having his teeth treated. He pays a billion and a quarter for his smokes and only about one-quarter as much for removing the nicotine stains from his teeth. He pays four hundred millions of dollars for cosmetics and only about two-thirds of that for putting the finishing touches to his teeth. In order to hold down his dental bill he works his dentists more than sixty hours a week, allows them very few and short vacations and neglects them entirely in sickness and old age. Whenever and wherever dental costs are high they are almost always the costs of neglect or accident. The better part of wisdom would be to take advantage of the remedy offered by preventive dentistry.—Editorial in Dental Outlook, Aug., 1931.

PHYSICAL · THERAPY
AND
RADIOLOGY

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PROHIBITIVELY EXTRAVAGANT ELECTROTHERAPY

EMERSON'S superior mouse trap builder might possibly have achieved success in a wilderness, if competing, albeit inferior, mouse trap builders were not too conveniently available and accommodating in price.

Electrotherapeutics has been scientifically approved abroad for many decades, but it is in the hospitals and clinics that such therapeutic measures are now almost exclusively being utilized to their most helpful extent. Only exceptionally is the physician in private practice equipped to furnish such service adequately to his clientele.

In the United States, scientific interest in electrotherapeutics is of comparatively recent growth. Although the hospitals have steadily augmented their physical therapy departments, it is to the general practitioner that this form of therapy owes a previously phenomenal impetus.

The past few years have been responsible for a slowly increasing development in the *science* of electrotherapeutics and a rapidly accelerating increase in the *art*. Manufacturers of apparatus have spent considerable time and money in devising new and presumedly improved electrical appliances, and it is to them, in large and commendable measure, that electrotherapy owes much of its past and present popularity. Nevertheless, the feverish competition to add to the possible mechanical modifications, without assured consideration of their therapeutic necessity, and the concurrently increasing expense, have been meeting with passive resistance on the part of a previously enthusiastic profession.

It is not a mere consonance that the apogee of electrotherapeutic interest and, concomitantly, enthusiastic development of equipment, coincided with the period of inflated values and abnormal prosperity sequent to the World War. With this transitory ebullition of unrestrained extravagance now relegated to the past and with, it is to be hoped, a future more sane appreciation of true and enduring worth, electrotherapy must either heed the economic handwriting on the wall or else be inevitably restricted within the hands of a comparative and specialistic few.

With a simple static machine; an inexpensive wall plate and a battery of cells; a "baker"; and, later, some conservatively

selected high-frequency and phototherapy apparatus, the pioneers achieved therapeutic results not to be detrimentally compared with those to be achieved in this later period, with its infinitely elaborated types of appliances. This profusion is not only bewildering but, combined with a steeply ascending cost, is automatically curtailing and will serve to increasingly abridge its utilization by the general practitioner.

Far be it from us to decry needed advancement, whatever the cost; but the very multiplicity of electro- and phototherapeutic devices and modifications, with a concomitant superabundance of antagonistically promulgated principles and practice, only serves to exasperatingly impede assured and scientific progress. The yearly extravagance of automobile buyers, for whom the next year's model is the only satisfactory one to possess, has been and is disquietingly paralleled by the almost ceaseless stream of new and more expensive electro- and phototherapy models. Considering the already lavish expenditures in time and money necessary to acquire a medical degree, it will be wise and profitable judgment upon the part of the manufacturers if they will concentrate upon simplifying and standardizing their apparatus and lessening the distributive expense of it.

What an already overburdened profession imperatively needs is standardized equipment that will give reliable service for a reasonably definite period of time. It does not expect to revise its therapeutic physics every year, upon the advent of new and more complicated modifications, and should not anticipate being compelled to scrap expensive but, assumed, obsolete apparatus for increasingly expensive and recurrently "improved" experiments.

Some three years ago we warned against an impending diminution in the then-widespread enthusiasm in physical therapy, which would require judicious recognition, by all concerned, if the ensuing apathy were not to become irretrievably chronic. Let those more vulnerably affected profit by the signs of the times and of the past. Either electrotherapy in the hands of the few who can finance the exuberant expenditures necessary for initiating and continuing such a costly and variable proposition; or else, simplification and reduced cost, to enable the majority, and not a limited minority, to procure this indispensable adjunct to daily practice.

J. E. G. W.

X-Ray Therapy of Whooping Cough

By C. S. Bucher, M.D., Champaign, Ill.

IN THE past few years, several papers have been published on the x-ray treatment of whooping cough, with variations in technic and a corresponding variation in results. This contribution is offered in the hope that the essential points of technic, giving the best results, will be sufficiently discussed and enough data given on cases treated to stimulate the use of x-rays in a much greater number of cases of that dreaded disease.

Pathology and Physiology

Briefly, the pathology of pertussis consists of early hypertrophy and hyperplasia of the bronchial and mediastinal lymph glands, which may last for weeks or even months after the contagious period (demonstrated by roentgenograms and fluoroscopy). The presence of inflammation and hypertrophy of the lymph nodes produces pressure and cough, which, in turn, causes destruction of the bronchial epithelium

with further irritation. There is also peribronchial thickening, involving the lower branches of the bronchial tree.

The *blood picture*, in nearly all cases examined, shows a marked leukocytosis, and with it the expected lymphocytosis.

Blood Chemistry: There is a striking decrease in the blood calcium (with, perhaps, parathyroid deficiency), which may produce tetany, and aid in producing the characteristic convulsive cough. A decrease in phosphorus and acidosis are also present, the acidosis being increased as emesis, with consequent lack of nourishment, progresses, tend to return the enlarged lymph glands to normal, relieving the pressure on surrounding structures, including the recurrent laryngeal, bronchial and sympathetic nerves and their plexus; the leukocytes are reduced in number, with a consequent reduction in the number and severity of the paroxysms, in a large percentage of the cases treated, and complete relief of distressing symptoms in a fair percentage of the cases.

Bowditch, Leonard and Smith, after observing over 500 cases treated by x-rays, state that the same diminution in the num-

Reporter and year reported	No. of cases	No. of treatments	Interval days	Improvement
Witherbe, W. D.—1924	26	3 to 4	2 to 3	Definite
Leonard, R. D.—1924	400	2 to 4	2	Relief of symptoms in 75% of cases; in infants, 100%.
Smith, Lewis W., Hess, Julius H.—1926	102	5 to 7	1 to 4	Relief of vomiting; reduction of number and severity of paroxysms.
Leonard, Ralph D.—1925	20	3 to 4	2	Vomiting stopped; paroxysms stopped in 75% of cases.
Bowditch, H. I. Leonard, R. D.—1924	20			Before treatment, 288 paroxysms in 24 hours: After treatment, 5th, 157; 10th, 96; 14th, 43.

Treatment

With the pathology as thus briefly outlined, the logical treatment would be to prevent, if possible or as much as possible, the production of the pathologic and physiologic chemical changes which take place, and to facilitate a rapid return to normal when they do occur.

X-rays possess several of these potentialities: They reduce the hypertrophied and hyperplastic lymph glands; have a sedative effect on the nerves; and, being a form of light, have an effect on metabolism.

By the ionizing effect of the x-rays, metabolic changes are produced, which ber and severity of the paroxysms occurs, whether the disease is at its onset or late in the paroxysmal stage.

My experience checks very closely with that of Leonard, who, in his first series, gave what he terms a one-third erythema dose; in a later series he reports much better results by giving about two-thirds of an erythema dose. I also began with a small dose, became discouraged and was about to condemn x-rays as a treatment for whooping cough, when much better results were obtained by improving the technic. A few case reports will illustrate this.

Case Reports

Case 1.— M. B., age 6 months, previous disease, none; paroxysms of cough in 24 hours, before treatment, varying from 12 to 24 on different days. There was no diminution in the paroxysms of cough after treatment. This illustrates the group receiving small doses of radiation, at intervals too long to obtain the best results.

Case 2.— T. S., age 9 years; previous disease, bronchitis; seen in the second week of whooping cough, which was very severe. Treatments were given on Dec. 21, 24 and 28, 1929, and Jan. 4, 1930. *Results*: After the first irradiation, the paroxysms at night decreased by about 50 percent; the second produced a slight improvement over first irradiation; and the third a more marked improvement. After the third day, the patient coughed only 3 or 4 times during the night and there was much less vomiting. This was a typical result, although requiring four exposures. Results in this individual would have been obtained earlier had the treatments been given every 48 hours.

Case 3.—J. S., age 5 years; previous diseases chicken-pox and measles; received 3 doses of stock pertussis vaccine, each of 1 cc., after-exposure to whooping cough; seen in the second week of cough; number of paroxysms before receiving x-ray treatment, one per hour. When he had received one x-ray treatment, the paroxysms were reduced from approximately 1 per hour to 1 during the night. Though this was a very gratifying result, it is not at all unlikely that this patient would have been entirely relieved had he received one more exposure, two days later.

Case 4.— A. T. age 4 years; no previous disease; whooping cough for 5½ weeks, severe; number of paroxysms of cough before treatment, 10 to 15 a night. After the first treatment the paroxysms were reduced 50 percent, and after the second to 4 or 5 in 24 hours, and were much milder.

This case illustrates the results of irradiation in the later stages of the disease. Equally good results were obtained as in the earlier stages.

Case 5.— E. K., age 5 years; previous disease, influenza; received seven doses of pertussis vaccine, given every third day, beginning 1 week after the cough started; stage of disease, first half of fourth week; paroxysms averaged 15 to 20 during the night. The first night following x-ray treatment the patient coughed at 1:00 A.M., and no more until rising in the morning; since then, about once a night. This shows results after the administration of vaccine had failed.

Case 6.— C. H., age 4 years; previous diseases, pneumonia and bronchitis; intervals between treatments, 3 and 6 days; number of paroxysms of cough before treatment, 5 to 6 a night; one paroxysm on the second night, after the second treatment; none the first night.

This illustrates the average result. The criticism here is that the length of time between second and third exposure should have been two days instead of six. This is very likely to occur where a good result has been experienced, as in this case, after the second exposure, which was thought to be sufficient, prompting the delay.

Case 7.— G. C., age 6½ years; no previous disease; number of paroxysms of cough in 24 hours before treatment, 12 to 15; after the first treatment the same; after the second, fewer at night; after the third treatment, none at night; number and severity of paroxysms reduced 75 percent.

Technic

The neck, head and abdomen were protected with lead; first treatments were given anterior-posterior, alternating with posterior-anterior thereafter; not more than two exposures over the same surface area.

Best results were obtained with the following factors; 110 peak kilovolts; 5 milliamperes; fifteen-inch target distance; filter, 2 millimeters of aluminum; time, 4 to 6 minutes, giving a wave length of 0.27 and 5 "r" per minute at 20 inches (which calculates 35.52 "r" in 4 minutes' exposure at 15 inches).

In the last 24 cases, results varied. There was no noticeable improvement in 1 case and little improvement in 2 cases. The severity and number of paroxysms were reduced 75 percent or more in 14 cases. The remaining 7 cases were in homes from which reports were indefinite or were not obtained. Those cases in this series, in which we were able to obtain cooperation and reports from the parents, show a high percentage of good results.

These patients were all transported to the Clinic for treatment by automobile. Our x-ray rooms are located on the first floor, with an outside entrance, thereby making it possible to treat these patients without their coming into contact with other patients or individuals.

Conclusions

1.—Irradiation reduces the affected lymph glands and the thickened bronchial tree in whooping cough.

2.—Vomiting is entirely stopped or greatly reduced, thereby permitting the ingestion of nourishment and the prevention of acidosis.

3.—The severity and number of paroxysms are reduced 75 percent or more in a very large percentage of the cases.

4.—The administration of alkalies, calcium, anti-spasmodics and sedatives is indicated, in conjunction with x-ray therapy, where the patients fail to respond promptly.

5.—The dosage should be carefully measured, the wave-length and "r" unit methods being preferable.

6.—Not more than two exposures, as outlined, should be given over one area.

CLINICAL MISCELLANY

Pyretotherapy by Diathermy in Chronic Afebrile Diseases*

THE use of artificially produced therapeutic fever is gaining importance in the treatment of chronic, afebrile diseases, notably neurosyphilis and arthritis.

A number of methods have been used for producing therapeutic hyperpyrexia, such as infection with malaria, intravenous injections of triple-typhoid vaccine or Coley's fluid, intramuscular injections of sulphur in oil, prolonged hot baths and diathermy. The last named method appears to be the most easily controllable and generally satisfactory.

In addition to the direct effects of the heat generated in the body by diathermy, there seem to be indirect effects, not yet fully understood, from stimulation of the general body metabolism.

It is unnecessary to produce very high temperatures in the patient (103° to 105°F. is sufficient). The treatments should be given every other day for 10 treatments. They are *contraindicated* in patients with *advanced* heart disease and syphilis.

J. CASH KING, M.D.,
Memphis, Tenn.

*Abstract (by G. B. L.) of a paper read before the Southern Medical Association, November, 1931.

Radiotherapy of Ovaries Relieves Diabetes

A DIABETIC woman who was treated by radiotherapy for fibroma showed a reduction of sugar in the urine from 45 grams per liter to 5 grams, and this reduction was maintained after the treatment. —DR. DENIER, in *J. de radiol et d'électrol.*, July, 1931.

Zinc Ionization in Accessory Sinus Disease

ZINC ionization gives good results in the less severe cases of sinus disease. Strips of gauze steeped in a one-fifth of 1 percent solution of zinc sulphate are packed in the cavity; an iron wire is attached to the packing and connected with the positive pole of the battery. A tin plate, fastened to the nape of the neck or forearm, forms the negative pole. The current varies from 5 to 10 milliamperes, according to tolerance, and is kept up for about 10 minutes.—DR. A. R. HOLLENDER, in *Tri State M. J.*, Aug., 1931.

Roentgen-Ray Castration and Breast Cancer

IN 163 cases of breast cancer, the appearance of improvement was more decided in women who had been castrated by ovarian irradiation than in those only subjected to irradiation of the breast.—DR. H. AHLBOM, in *Acta Radiol.*, Dec. 31, 1930.

Physical Therapy in Treatment of Burns

FOLLOWING surgical debridement in cases of extensive burns, the wound surfaces were prepared for skin grafting by the use of continuous heat and ultraviolet irradiations. The heat was derived from an "oven baker," containing five tungsten-filament lamps consuming from 25 to 60 watts per bulb. For the irradiations a mercury arc lamp was used; 100 to 150 percent of the erythema dose was given at the first treatment, gradually decreased to about 70 percent in following treatments. The wounds were ready for grafting in about 2 weeks. The irradiations were continued following grafting, to prevent infection.—DR. W. S. PECK, in *Arch. Phys. Therap., X-Ray, Radium*, June, 1931.

Ultraviolet Rays and Tanning

IT IS thoroughly understood that ultraviolet energy will produce tanning of the skin, but it is not understood so generally that tanning of the skin is a distinct aid in the action of ultraviolet rays. Melanin, the substance which is deposited when the skin is tanned, changes the wavelength of ultraviolet rays, allowing the energy to be conducted through the most superficial epidermis into the deeper layers. Consequently, the energy is better utilized. The general belief seems to be that tanning is a reaction to protect the body from

ultraviolet rays, as one might say, pulling down a shade. This, however, is not the fact. It merely converts the energy into a more penetrating form. — DR. N. E. TITUS, of New York City, in *Arch. Phys. Therap., X-Ray, Radium,* August, 1931.

Physical Therapy in Arthritis

PHYSICAL therapy is of best service in arthritis when the disease is past the subacute stage and all sources of possible infection have been taken care of and when the disturbing pathologic changes are confined to one or two joints.—DR. R. KOVACS, of New York, in *M. J & Record,* Sept. 16, 1931.

Irradiation and the Leukemias

IN *DEEP* x-ray therapy of leukemic cases, the higher the percentage of actively phagocytic neutrophils present, the more quickly does the blood picture improve, the spleen decrease in size and the more lasting is the effect. Care should be taken never to reduce the phagocytic power below that of normal blood.—DRS. W. L. WATT and F. A. KNOTT, in *Guy's Hosp. Reports,* Apr., 1931.

Infective Plantar Warts Treated by Radium

A *HALF-STRENGTH,* unscreened radium plate can be applied to any wart. The surrounding callosities and skin should be protected with thin lead and the plate strapped on firmly for 4 hours. In about 10 days there will be a local redness and swelling, which will gradually subside, and a month from the date of treatment the lesion will have faded away, leaving no scar whatever. — DR. W. J. O'DONOVAN, of London, in *Brit. J. Physical Med.,* June, 1931.

Fluorescein and Irradiation in the Treatment of Cancer

SATISFACTORY results have been obtained in certain cases of cancer by the use of a slightly alkaline solution of the sodium salt of fluorescein, sprayed or painted widely over the surface of the growth and then followed by the application of radium or x-rays. For deeply-seated growths, the fluorescein may be administered orally or intravenously, followed by irradiation. The effect is to check diffusion of the cancer cells. — DR. S. M. COPEMAN, in *Brit. M. J.,* Apr. 18, 1931.

RECENT ABSTRACTS

The Faradic Current in Sensory Disturbances

As stated by Dr. L. D. Bailey, of London, Eng., in *Brit. J. Phys. Med.,* Sept. 1931, too little use is made of the Faradic current in the treatment of cases where sensation is impaired or entirely absent. Provided the cause of the condition can be removed, it is surprising how the recovery of sensation can be hastened by the use of the faradic brush, applied to the skin. And not only can recovery be hastened, but a very shrewd idea of the progress of the case can be arrived at by careful note of the strength of the current necessary to produce feeling in the damaged area.

Functional anesthesia can be entirely cured by means of the faradic current and a little ingenuity on the part of the operator. The technic is as follows:

The current is applied to the distal end of the affected area by means of the brush or roller electrode, the other electrode being situated over the area where the sensory roots of the nerves supplying the part emerge from the spinal canal.

As is usual in these cases, there is an abrupt line on the skin, below which no sensation is appreciated. On the other hand, these patients usually retain their "muscle sense" and appreciate deep pressure—facts which are made use of by the operator.

The lowest limit of sensation to the current is first ascertained and the patient is made to direct his attention on this spot. Deep pressure is then made by the operator's fingers and thumb a little below this spot and the patient is asked if he can feel it. The answer is usually —"Yes."

He is then told to concentrate his attention on this second spot and it is suggested that he will feel the current there next time the electrode is moved along the skin. In nine cases out of ten when this second spot is reached, the patient will acknowledge that he can feel the current.

Gradually the current can be appreciated further and further away from the original place until feeling is restored throughout the affected part. This can be accomplished occasionally at one sitting, but relapses are apt to occur and several treatments may be necessary, though ultimate cure is almost certain.

The Future of Deep Roentgenotherapy

An editorial by Dr. J. T. Case, of Chicago, in *Am. J. Surgery*, Aug. 1931, refers to the insufficient and unsatisfactory clinical results in the treatment of cancer by the present methods of application of both deep roentgenotherapy and radium therapy. In general terms, the law of inverse squares operates, so that a uniformity of therapeutic action on tumor tissues cannot be achieved.

Dr. Case points out that within the last two years a new development in x-ray therapy has been seen in the production of apparatus capable of generating ultra-penetrating rays. Whereas, in 1913, when Coolidge put his first tubes on the market, by the expression "deep therapy" one meant a pulsating current with a voltage of 125,000 to 130,000, recently a voltage af 200, 000 was considered the minimum for efficient deep roentgenotherapy.

But now one hears of immense installations, with enormous tubes producing x-rays at voltage from 500,000 to nearly a million. At least one installation for 900,000 volts is in experimental use at present in the United States, with an output of ultra-penetrating x-rays equivalent to the gamma rays of an enormous quantity of radium at a fraction of the cost of radium.

These more penetrating rays really have a short wave-length, comparable to that of the shorter gamma rays of radium, so that German authorities talk of "gamma-volt" x-ray equipment.

With this newest x-ray apparatus, the distance of the tube from the patient will have to be greatly increased, but this will be compensated for by the greatly improved quality and quantity of radiation. Thus we see promise of achievement of the ideal of an abundance of "gamma" radiation, applied at a considerable distance from the part under attack.

No one knows with certainty what the outcome will be but it seems reasonably safe to believe that the results will be better.

Physical Therapy in the Treatment of Fractures

As stated in J.A.M.A., July 25, 1931, Dr. C. R. Murray, of New York City, is convinced that properly applied physical therapy can be of great value in minimizing residual disability and deformity and in cutting down the period of treatment necessary to secure a satisfactory end-result in the treatment of fractures.

Appropriate physical therapy should be used from the beginning of treatment. It is the much-neglected opportunity for optimal benefit from physical therapy.

The appropriate physical therapy should be of the simplest type—elevation of moderate degree, heat, massage and stimulation of the muscles. Heat can be employed in any form. The massage should be of one type only: a light stroking massage, as described by Mennell. For the muscle stimulation, the Bristow coil is better than galvanism or faradism and the new Smart coil is better than the Bristow. Physical therapy that hurts the patient or causes muscle spasm is of no value.

The regaining of function is the patient's own job. He must exercise the limb. Neither physician nor physical therapist can do the patient's own work for him and every effort should be made to see that it is properly done by him.

Pyelography with Emulsified Campiodol

In *Am. J. Surg.*, June 1931, Dr. J. W. Visher, of Evansville, Ind., who for the past 8 years has tried various solutions for pyelography, reports that pyelograms made with emulsified campiodol (non-toxic, iodized rape-seed oil) are as clear as those obtained with 12.5-percent sodium iodide, and ureterograms are better, as the increased viscosity delays the emptying time of the ureter.

Warmed campiodol emulsion can be injected easily through a No. 6 French catheter, and the patient has no discomfort until the kidney pelvis is full. There is no after-pain, unless the pelvis has been over-distended.

The author agrees with other writers that campiodol is remarkably free from irritating properties.

Radiology in Medical Practice

Two papers appear in J.A.M.A., May 23, 1931, regarding the relation of radiology to the practice of medicine.

Dr. A. C. Christie, of Washington, D. C., believes that the practice of radiology has firmly established itself as a valuable special branch of medicine. It is founded on a knowledge of pathology and sound training in clinical medicine. Radiologists with such training and experience are qualified to serve as medical consultants and, in the present state of medical practice, are the best possible liason between the general practitioner, the surgeon, and internist and the specialist in various fields. Radiology so practiced offers values, to both the patient and physician, far beyond anything possible when practiced by otherwise able men with only meager training and experience in the field.

Dr. A. U. Desjardins, of the Mayo Clinic, in the same journal, deplores the position assumed by the commercial roentgenologic clinic run by laymen which, unfortunately, too many physicians encourage and trust.

He also states that in many hospitals the position of the roentgenologist is not properly regarded or appreciated.

The increasingly important relation of radiology to every phase of medicine is obvious. It must be equally clear that the successful practice of radiology requires a broad and thorough training in medicine; a good working knowledge of certain aspects of physics and chemistry: much special training and experience in the making and interpretation of roentgenograms: in the use of roentgenoscopy and many more or less intricate methods which have come into vogue in the sensitiveness of different kinds of cells, tissues and organs, to roentgen rays and radium; in the action of such rays on diseases affecting such tissues or organs; and in the physical methods of measuring the quantity

and quality of radiation best adapted to influence favorably the lesions treated.

It seems not only logical but essential, therefore, to require that such work be restricted to graduates in medicine. In Dr. Desjardin's opinion, radiology as a career furnishes the best opportunity in medicine today. At the present time, radiologic and radiotherapeutic practice of high grade is a rare commodity. Plates made by laymen and technicians are interpreted by practitioners who are insufficiently instructed in the specialty.

Eye Lesions Treated by Ultraviolet Rays

In *Radiology*, May, 1931, Drs. J. S. Coulter and E. M. Smith state that corneal ulcers respond well to a concentrated form of ultraviolet radiation.

In determining the dosage, the authors used a mercury-quartz, water-cooled lamp on the conjunctiva and cornea of six rabbits. With this lamp at a distance of about one inch, it took, on the average, 40 seconds to secure a superficial cell destruction, which could be detected by the use of fluorescein. Therefore, they give their patients only a 30-second dose at the same distance.

Local treatment is of benefit in corneal ulcer, tuberculosis of the cornea and conjunctiva, trachoma and blepharitis. Herpetic lesions show the most marked effect of such treatment. General body radiations are of benefit in phlyctenular keratitis and in ocular conditons due to tuberculosis.

Radium in the Treatment of Menstrual Disorders

Dr. Howard A. Kelly in *J.A.M.A.*, Sept. 12, 1931, emphasizes the need of making, invariably, a thorough general examination, including an accurate knowledge of the condition of the pelvic organs, gained both by curretage and by bimanual examination (exceptions in the latter to be made sometimes in the case of young women). It is also an excellent principle, where the benefits are doubtful, to begin radium treatment with a small dosage, increasing it if marked improvement is noted.

The treatment of excessive menstruation in young women has been investigated in the author's hospital, on a basis of 30 patients aged from 13 to 25 years. In 6, the hemoglobin was between 30 and 60 percent. Divided into groups, there were 16 cases in which the period became normal immediately or soon after treatment and remained so; in 5 there was a temporary amenorrhea, with a later return of normal menstruation; and there was a permanent group of 6 patients, all of whom had the nervous phenomena incident to the cessation of menstruation, but their general health was good.

Excellent resuks have also been obtained in menopausal hemorrhage, in hemorrhage associated with fibroid tumors, in some cases of migraine and other conditions dependent on the menstrual function.

BOOKS

Peter: Diathermy

100 REZEPTE MEDIZINISCHE DIATHERMIE; Anleitung zur Verordnungsweise fur die elektrische Durchwärmung. *Bearbeitet von Dr. Carl Peter, Berlin. Berlin and Vienna: Urban & Schwarzenberg.* 1931. *Price RM* 2.—.

This primer contains, besides a general introductory discussion, 100 recipes or formulas for medical diathermic treatments in various conditions. They are intended for the use of practitioners who are not technicians.

NEWS NOTES

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Prize-Winning Radiologists

At the recent meeting of the Radiological Society of North America, the gold medal of the Society was conferred upon its past-president (1929) **Dr. Maximilian J. Hubeny** (right), of Chicago, for his long and devoted service to the science of radiology. Dr. Carlos Heuser, of Buenos Aires, Argentina (left) also received an award for his studies of cancer of the uterus, using radiopaque materials.

OUR DEBT TO SCIENCE

Our greatest debt to science is that it has freed us from the devils created by the mind—the imaginary fears that once held the mass of mankind in bondage. — WALTER GRIERSON.

THE · SEMINAR

CONDUCTED BY

MAX THOREK, M.D., (*Surgery*)
GEORGE B. LAKE, M.D. (*Medicine, Ethics and Economics*)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted. Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 12—1931 (SURGICAL)

Presented by Dr. James P. Tye, Albany, Ga.

(See CLIN. MED. & SURG., Dec., 1931, p. 906)

Recapitulation: A negro woman, 40 years old, who had always been healthy, was taken ill, six weeks before consulting the doctor, with frequent urination, fever and general malaise. She now complains of frequency, general malaise, asthenia and an occasional evening temperature of 99°F.

Physical examination shows a hard, immovable mass in the epigastrium, extending to the right. A roentgenogram showed a calcified, lobulated mass in the region of the right kidney. Cystoscopy showed a chronically inflamed bladder and left ureter. The right ureter was not found. The pyelogram, after the injection of Skiodan, is shown herewith. The blood showed a leukocyte count of 10,800, with 79 per cent polymorphonuclears. A few pus cells and many motile bacteria (none of them acid-fast) were found in the urine. The Wassermann test was negative.

Requirement: Suggest diagnosis and treatment.

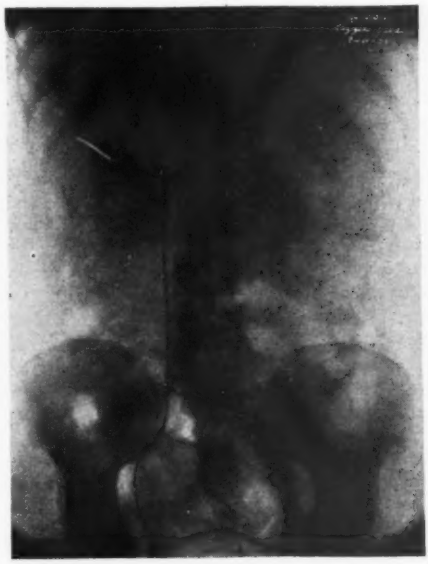

Fig. 1. — Posterio-anterior Roentgenogram, Showing Ureter and Kidney Pelvis on Left Side and Mass on Right.

DISCUSSION BY DR. B. B. PARKER, ALLERTON, IA.

The case as presented suggests to me the diagnosis of congenital anomalous kidney that has been present since birth and in which there has formed a large calculus in the region of what should have been the right kidney pelvis, and that the present trouble is due to the superimposition of infection, producing, at this time, pyonephrosis.

The absence of any evidence that a ureter ever was present on the right side practically makes it certain that this is a congenital abnormality, upon which the present condition has developed.

Diagnosis: Pyonephrosis and renal calculus.

Treatment: Symptomatic and non-surgical.

DISCUSSION BY DR. EMIL C. JUNGER, SOLDIER, IA.

Problem No. 12 seems easy. There is no kidney on the right side of this patient. It is possible that this is a horseshoe kidney or a neoplasm that destroyed the right kidney.

The bladder congestion suggests that there has been a chronic, mildly infectious nephritis that destroyed the kidney and now leaves a calcified mass in its place. This may be a large stone that has been in this kidney for years and caused the destruction of kidney substance.

The mass should be removed surgically, and this should result in the patient's recovery, if the condition proves not to be malignant.

DISCUSSION BY DR. F. D. LAROCHELLE, SPRINGFIELD, MASS.

At the risk of again being accused of punctilious exactness, I want to call attention to the fact that the information given here is incomplete. The art and science of surgery have passed through the empiric and anatomic era, and now the physiologic or clinical stage is in full sway. By that I understand that this patient does not present a surgical problem at all; *that stage has not been reached.*

Progress in science was slow until men learned to disassociate their problems into their elements and attack them one by one. It is my philosophy to make a diagnosis first, without obscuring my vision with the matter of treatment. That comes after, in due course, once a conclusion as to the nature of the pathologic condition has been reached. Then the various possible forms of treatment can be listed, in the order of their importance, and the one offering most promise selected. If surgical treatment is indicated, that becomes a new problem by itself. Of course, in many instances, this sharp distinction cannot be made, for the dividing line is not clear, but it is always dangerous to confuse the two knowingly.

This school teacher evidently suffers from a chronic infection. While it is stated that she was in good health six weeks before coming under observation, there is no objective evidence to support this, and that statement is probably incorrect. The weight curve during the past year might throw light on this question. It would appear that the infection is limited to the urinary tract, in the absence of any reference to the chest or genital organs.

To say that the physical examination was negative with the exception noted is to progress too rapidly. When I was an intern, we wrote histories, physical examinations, etc., in batches and, as I look back now, it appears that I must have had more confidence in my memory than I have now. Negative findings reported in that manner had little value, and here this is probably not intended to be understood strictly. To make myself clear, I mean that if, by chance, this patient were to come to autopsy in the near future, I would be extremely surprised if that report were confirmed.

The mass described under physical examination is apparently in the kidney. Calcification naturally suggests tuberculosis and, since we know that this condition is common in the colored race, it is a clue not to be lost sight of in this study.

The Skiodan examination leaves little doubt about the kidney being involved. Whatever the lesion may be, it is evident that it has destroyed most of the parenchyma. The few pus cells and motile organisms suggests a colon infection, and this is probably of accessory significance. The urine might well be inoculated into a guinea pig, to determine if any tubercle bacilli are present. This is more reliable than the smear method.

The blood findings are those of secondary anemia and are consistent with any chronic infection.

This discussion is intended to emphasize the general principles that underlie surgical methods.

In conclusion, I believe that a further study should be made of this patient to arrive, if possible, at an exact diagnosis and, when all measures have been exhausted, the remaining link, if any, might well be supplied by surgical exploration.

DISCUSSION BY DR. J. R. STURRE, MINNEAPOLIS, MINN.

This very interesting problem is, in my opinion, a case of closed pyonephrosis, complicating an old tuberculous process in the right kidney, with calcification of the pyonephrotic sac.

What has happened is this: A tuberculous kidney, with a tuberculous ureteritis, has developed pyonephrosis; then, as the disease advanced, the kidney was destroyed and lost its function and the ureter became impermeable. Sufficient time has passed so that the ureteral meatus in the bladder has become atrophic and, having no function, is unrecognizable. Along with the closure of the ureter and loss of function and atrophy of the kidney calcification has occurred.

We have a urine negative for acid-fast bacilli. However, injection into a guinea pig should be done. A method for doing this which gives a positive finding in about ten days, instead of the usual six weeks, is to inject the material into the inguinal region and injure the inguinal lymph nodes by pinching them.

Also stereoscopic x-ray films of her chest should be made, and probably a pulmonary lesion of tuberculosis will be demonstrated by this method. A pelvic examination might reveal tubal masses.

Treatment: The patient has chronic cystitis and a chronically inflamed left ureter, with normal pyelogram. I should give her bladder irrigations with 1:10,000 silver nitrate solution. It might be advisable to add pelvic lavage of the left kidney.

I do not believe surgical removal of her right kidney will do her any particular good. It also would probably do no harm. The right kidney has been amputated by nature's methods.

Her complaint goes back six weeks, and with a negative pyelogram of the left kidney, I should check this repeatedly, as undoubtedly her present complaints are due to involvement of the left kidney, which is yet so early that the pyelogram shows no change.

General good hygienic routine should be instituted, as in treating tuberculosis, with rest in bed as long as she has fever.

Tuberculin may be used and may give decided benefit. The dose should be *small* and given twice a week. I would not exceed 1/75,000 mgm. at the beginning.

Chaulmoogra oil, 10 cc. instilled into the bladder, with 15 cc. by mouth three times a day, has been used with good results.

Prognosis: This patient may live a long time. She should eventually develop amyloid disease or die of a uremia. There is a possibility of generalized tuberculosis, terminating in meningitis. There is a possibility that she has amyloid now. This can be reasonably determined by the Congo red retention test.

Discussion by Dr. Winfield Scott Pugh, New York City

The history in renal disease is often of greater significance than we practitioners are wont to believe. Nothing is too trivial to be considered and often a connotation appears where least suspected. It is clearly consonant with the facts to feel sure that this woman was ill over a greater period than the history tells us.

No particular symptoms were elicited except frequency of urination, fever and general malaise. These mean nothing, as frequency, urgency and dysuria only serve to call our attention to the urinary tract; nothing more nor less. The fever in the afternoon is, of course, of little significance.

The physical examination, it is stated, was negative, except for the presence of a mass. No physical examination in such an instance is complete without a vaginal examination. Here we often find marked evidence of ureteritis, tuberculosis or stone in the ureter. Everything in this history suggests that this might be highly informative.

The abdominal palpation reveals a mass in the epigastrium, which seems to disappear beneath the liver. The x-rays show a well-calcified, lobulated mass in the right kidney region. There are two chief possibilities here: calcified retroperitoneal glands or calcified tuberculous kidney.

As we proceed to analyze the cystoscopy findings, we note a very small, chronically inflamed bladder. The doctor does not tell us if this organ was ulcerated, as so many of this type are. He does state, however, that the left ureter showed evidence of chronic inflammation. As he could not visualize the interior of the ureter, it is evidently the bladder orifice of that organ which was inflamed. Remember, in these cases where a ureter orifice is so affected, it is often the opposite kidney which is at fault. The left ureter was readily catheterized, but on the right we note that the ureter could not be found. Why? Because in this type of case it is often contracted and draws the bladder area surrounding its orifice up like a tent. Complete obstruction was also present, as no dye was seen

after chromoscopy. A vaginal examination will probably reveal the ureter as a rigid pencil.

To me this would be an ideal case for intravenous urography, which the doctor carried out. In the x-ray picture at hand, I cannot make out the right kidney particularly well, but there is a suggestion of a mass. In the pelvis, however, we note what seems to be a large pelvic ureter on the right side, located very much like its fellow of the left.

The blood examination is of little aid, as is that of the urine also.

From the facts presented in this instance, I am inclined to believe that the case at hand is one of tuberculosis of the right kidney and ureter. A nephrotomy, and probably a nephro-ureterectomy, is definitely indicated.

SOLUTION BY DR. MAX THOREK, CHICAGO

We are indebted to Dr. Tye for a very instructive problem. The difficulty in diagnosis here is apparent. Dr. Parker suggests the possibility of a congenital anomaly of the kidney. Fused kidney, horseshoe-kidney and other congenital anomalies are by no means rare. His diagnosis of a possible pyonephrosis with renal calculus is worth remembering; but it seems to me that his suggestion for therapy will not meet with general approval. For, in the case of a pyonephrosis, surgery is definitely indicated and in the case of a renal calculus productive of symptoms, particularly if associated with infection, symptomatic treatment is usually of no avail and some form of surgery has to be resorted to before relief may be expected.

In line with this thought, I believe that the surgical reasoning of Dr. Junger requires scrutinizing. His statement that the case is an easy one for diagnosis I cannot subscribe to.

Suppose, one cannot definitely ascertain the presence of some kidney structure on the right side and supposing that the kidney has been destroyed through some low-grade inflammatory process, as suggested by Dr. Junger, and that a large calcified mass is substituted for the kidney tissue. If such be the case, it is my opinion that, in this instance, surgery should be resorted to without hesitation.

Dr. LaRochelle insists that more data be obtained before suggestions for therapy are considered. He insists on a diagnosis first. This is correct.

It seems to me, however, that important factors only should be considered. I find it difficult to ask most of my patients, as does Dr. LaRochelle to observe a weight-curve for any extended period. There are only two classes of people who pay attention to their weight curve; the reducing obese and the hypochondriac. In the case under discussion, these factors can be eliminated.

Dr. Tye cannot be taken to task for stating that "the physical examination was negative."

In our routine of taking histories, no matter how carefully such histories are taken, and no matter how experienced a man may be, he will, in many cases note on his records of physical examination, "essentially negative," regardless of what pathologic conditions may be found later, and this is reasonable, as long as the examiner is conscientious and thorough. Neither Dr. Tye nor any one of us can do better than is expected of any sincere physician who puts down his findings as he observes them.

I agree with Dr. LaRochelle that tuberculosis with calcification should be strongly suspected. However, it must be remembered that too much procrastination and super-punctilious dogmatization has cost many a patient's life. There is no doubt that we are dealing with a kidney lesion here and, in all probability, as Dr. LaRochelle suggests, a Koch bacillus infection of the kidney, with calcification.

Supposing we run into a tumor; supposing the condition is a pyonephrosis; supposing it is any other form of infection with localization in the right kidney; why procrastinate? Why jeopardize the life of the patient? If the process is limited to one side, shall we stand by watching the results of guinea pig inoculations and permit, perhaps, valuable time to slip by until other organs become affected?

Therefore, with the exception, of course, of advanced malignant disease with metastases, an exploratory operation is here strictly indicated and the surgical focus should be promptly attacked and eliminated.

The best successes are obtained in the practice of our science and art if one combines the academic with the practical. The middle of the road should be sought. Let common sense guide us.

Just as it would be useless to operate on a malignant tumor of the kidney where

metastatic dissemination has already occurred, so would it be wrong to stand by in a case of other kidney disease, as in this case, where other organs and even the life of the patient are jeopardized while waiting for the appearance of diagnostic niceties.

Surgical exploration in this case is definitely indicated. It is better to make a postoperative diagnosis which does not coincide with the clinical diagnosis and have the patient live, than to wait to make a definite clinical diagnosis and have the post-mortem findings tickle our vanity by finding out that we were right.

Dr. Sturre analyzes the question very well, indeed. The first half of his discussion is splendid. With the second half, I do not entirely agree. You will observe that the Doctor inclines to the belief that there may be an involvement of the left kidney. We have no proof that such is the case, but we have proof that there is a pathologic, non-functioning kidney on the right side.

Dr. Sturre justly emphasizes that, if a guinea pig inoculation is desired, we should follow the method of injecting the inguinal glands instead of the general peritoneal cavity. I take it for granted that Dr. Tye has complied with the suggestion made by Dr. Sturre already; namely, roentgenographic study of the chest and pelvic examination.

Before closing, let us analyze for a moment Dr. Sturre's statement in which he says, "I do not believe surgical removal of the right kidney would do her any particular good. I also do not believe it would do her any harm."

As long as we agree that the removal of the pathologic focus will do her no harm, it is certainly worthwhile to cash in on the beneficial results that may follow a surgical exploration.

Without having seen the patient, I am inclined, from a descriptive point of view, to believe that the sooner the right kidney is eliminated, the better off will this patient be.

I was pleased with Dr. Pugh's discussion. It is to the point. I did not read his comments until I had analyzed the views of the other discussants. His reasoning, you will observe, is on the same line as mine.

It will be interesting to know what the further progress in this case has been. I will be much indebted to Dr. Tye if he will let us have the final outcome of this interesting surgical problem.

A Farewell Solution

It is with sincere regret that we announce that this is the last of Dr. Max Thorek's solutions, as associate editor of the *Seminar*. With his appointment to the attending staff of Cook County Hospital his duties have increased to the point where he feels that he can no longer carry this responsibility.

We shall not, however, be deprived of his helpful comments on our problems, for he has promised to take part in the discussions frequently, even though he cannot undertake to do this work on a regular schedule.

We are grateful to Dr. Thorek for the assistance he has given us and glad that we shall not wholly lack the benefit of his ripe surgical judgment in the future.—Ed.

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We earnestly request our readers to submit well worked up medical, surgical and economic problems for discussion, and *do it promptly*.

Without problems to discuss, how can the *Seminar* continue to be helpful to you? —Ed.

Problem No. 2 (Economic)

A head surgeon, who had developed certain special technics, found that a number of physicians were eager to learn them and, having no desire to keep his methods secret, readily took those who were interested into his office, for periods of days or weeks, and showed them just what he was doing, without making any charge for this service—in fact, refusing payment when it was offered, as he felt that this teaching was a part of his professional duty.

The news of his work has now spread to the extent where the demands upon his time, as a teacher, threaten to interfere seriously with his practice.

Requirement: What should be his course of action? Should he make such a charge for the instruction he gives as will compensate him for the practice he loses in this way? Or should he refuse to accept any students at all? There seems to be no middle course, without giving offense to worthy and able men who cannot be included in his schedule.

THE · CLINIC

INTERNAL MEDICINE

Gastrointestinal Hemorrhage*

By W. H. Marshall, M.D., F.A.C.P., Flint, Mich.

CASE 1.—Mrs. S., age 28 years, was admitted two weeks ago, after vomiting about a pint of bright-red blood. No familial diseases are recorded. She was married six years ago and, apart from the common infections of childhood, she was well until after the birth of her only child, four years ago. During lactation, she became anemic and was given "shots in the arms". Two years ago, she vomited blood and was told that she had a peptic ulcer. On three occasions since then she had vomited blood. These attacks come on suddenly, without warning, and without any preceding gastric distress. In one attack, vomited blood for three days. She had noted no purpura nor hematuria. After an attack, she rapidly regains her color and her strength. For the last few months, she has noted a dull aching sensation in the left upper quadrant of the abdomen. No other symptoms of importance are elicited.

Upon examination, she is found to be a well-developed, well-nourished white female, with a pronounced pallor. The sclerae are clear. Examination of the abdomen reveals an enlarged spleen, which can be palpated a hand's breadth below the left costal margin. It is smooth and is not tender. One can just palpate the liver at the costal margins. Ascites cannot be demonstrated. The superficial lymph nodes are not enlarged. A careful examination by systems reveals no other positive findings. Her temperature is normal and the urine high-colored, with a faint trace of albumin. The Wassermann test is negative. The red blood cells number 2,500,000, with no important qualitative changes reported. The hemoglobin is 40 percent. The white cell count is 3,000, with a relative lymphocytosis. The fragility test with salt solution shows hemolysis beginning at 0.45 percent and completed at 0.3 percent. Both bleeding and clotting times are normal.

This is a typical picture of **splenic anemia.** Peptic ulcer is not likely, on account of the absence of dyspeptic symptoms. The liver is not large enough for a Hanot's hypertrophic cirrhosis. Her temperate habits exclude a Laennec or alcoholic cirrhosis. In Gaucher's disease the liver is much larger and a brownish discoloration of the skin and of the conjunctivae is quite usual. Chronic hemolytic jaundice, either congenital or acquired, is excluded by the normal fragility time. One sees cases of subacute bacterial endocarditis with somewhat similar findings, but the absence of fever, of leucocytosis, of embolic phenomena and of cardiac signs would eliminate this disease.

The early hematemesis in splenic anemia is due to rupture of varicosities of the veins about the cardiac end of the stomach. This can come about, as a result of the fibrosis of the spleen, even before a marked interlobar fibrosis of the liver is at all marked. To be sure, as the disease progresses, hepatic cirrhosis may be expected and, as a result, slight icterus and ascites.

The only treatment to be considered is splenectomy. The operative mortality is

*An abstract of cases from the weekly medical clinic for interns, Hurley Hospital, Flint, Mich.

less than 10 percent and the results, in this stage of the disease, are usually very good. However, one should not promise her that she will never again have hematemesis. When splenic anemia is seen at a later stage, with hepatic cirrhosis and ascites, the operation does very little good and the mortality is much higher. This syndrome was first described by Banti, in 1894, and nothing definite is known of its cause or pathogenesis. It is an insidious disease, existing for months or years before it is suspected, and progressing gradually to cause death in five to ten years.

Case 2.—Mrs. C., a colored housewife aged 35, was admitted with complaints of vomiting blood, bloody stools, headache and failing vision. Her past history contains nothing of importance, except that she had many convulsions with her last confinement, ten years ago. During the past six months she has felt tired and awakens with headache. Her vision failed rapidly during this time. For a week prior to admission, she has complained of nausea and vomiting, and today she vomited about eight ounces of blood. She has had diarrhea for about a week and, for the last two days, her stools have contained blood, both tarry and bright-red. She has been short of breath on exertion for about six months and has had occasional attacks of paroxysmal nocturnal dyspnea.

Upon examination, she is found to be very thin, weighing only 102 pounds. Fine muscular twitchings are noted. Her pupils react to light and accommodation. Both eyegrounds show whitish scars and recent hemorrhages. Her teeth are poor and her gums are bleeding. There is a foul, ammoniacal odor to the breath. The cardiac apex beat is palpated in the sixth space in the anterior axillary line, and is heaving in quality. There is a systolic blow at the apex and the aortic second sound is accentuated. The pulse is 84, regular and tense, the blood pressure being 260/160. A few crepitant rales can be heard at the bases after deep inspiration. The liver cannot be felt below the costal margins. Examination of the central nervous system is negative. There has been marked oliguria for several days and the urine contains albumin and many casts. The Wassermann test is negative. The blood-cell count shows a slight secondary anemia. The blood urea nitrogen is 200 mgm. and the creatinin 9 mgm. per 100 cc. of blood.

Obviously, we are dealing with a case of **chronic nephritis,** going on to uremia. Gastrointestinal hemorrhage is not uncommon in the terminal stages of nephritis. At necropsy, gastritis is commonly found, and occasionally superficial ulcers. The ulcerative process is more pronounced in the solitary follicles and Peyer's patches of the gut. These ulcers may be found in any part of the intestine and are usually quite superficial. The cause is uncertain. Some have assumed that the vicarious elimination of urea by the intestine causes the irritation. Others believe that bacteria split up urea in the gut, producing ammonia, which may act as a chemical irritant.

The prognosis in the presence of such a marked renal insufficiency is very grave. On account of the marked dehydration, this patient will be given a 5-percent dextrose solution intravenously, 1,000 cc. each 24 hours for a day or two. She will be wrapped in an electric blanket, to produce vasodilatation. If the vomiting should cease, she will be given a high-carbohydrate, low-protein and medium-fat diet. At present, there is no need of cardiac stimulants, and diuretics are contraindicated. A standing order is given for morphine, hypodermically, in case convulsions should occur.

Case 3.—H. M., a white male, aged 52, unemployed, entered the hospital four weeks ago complaining of tarry stools, epigastric pain and weakness. He was well until three years ago, when he began to suffer from "indigestion". He complained of epigastric pain two or three hours after each meal and found that this pain could be controlled by taking soda. He thinks that he is worse in cold, damp weather and that he is better in the summer. Apart from this he had no other complaints until he noted blood in his stools four weeks ago.

He is a well-developed, well-nourished man, weighing 170 pounds and, apart from pallor, he does not appear to be acutely ill. Examination by systems reveals nothing except a slight localized tenderness in the epigastrium. The red blood cells number 2,500,000; the whites 10,000 and the hemoglobin is 45 percent. His Wassermann test is negative. An Ewald test breakfast was aspirated two weeks ago and the free hydrochloric acid was 20 percent and total acidity 40 percent. Occult blood was found in the feces

for ten days after admission. Three weeks after his admission, a gastrointestinal examination was made. The essential part of the report is that the duodenal cap is ragged and cannot be filled during fluoroscopy. In passing, I should like to warn against the danger of having x-ray examinations made too soon after a hemorrhage.

This history is typical of a **chronic duodenal ulcer,** complicated by hemorrhage. Much has been written about the ultimate causation of chronic peptic ulcer, but as most of the theories rest on very slight evidence, we admit that we are quite ignorant of how an ulcer starts.

There can never be a routine treatment for peptic ulcer; rather, we have *individuals* of varying types, with variable social and economic backgrounds, who have ulcers. The acute ulcer, or rather an ulcer that has only recently produced symptoms, responds very well to a medical regimen in fully 80 percent of the cases; but when a patient presents a long history of previous attacks, the ulcer is a chronic one, with indurated margins, and not only may not heal, but is likely to perforate or give rise to alarming hemorrhage. In such cases an operation should be advised. Moreover, the location of the ulcer has a bearing.

Very few chronic gastric ulcers do well on medical treatment. There is no sure way of determining whether the ulcer is malignant or not from the very start, and probably a small percentage of them eventually become malignant. The social and economic status of the patient must be considered. If he is so situated that he can adapt himself to a rather fussy dietary regime and also secure adequate rest, medical treatment is favored; but if he lives a busy life and finds that attention to his diet is irksome, he will be safer and more contented after an operation.

Complications must also be considered. Pyloric obstruction, if not due to spasm or edema, calls for operation, as does profuse recurrent hemorrhage. We often see patients with visceral syphilis or with tuberculosis, who also have ulcers, and we prefer to treat these cases medically. One hears a good deal about the ulcer type of constitution. The proof of this is not very convincing. So, too, in approaching a study of the emotional status of our patient, one is often at a loss to decide whether the anxiety is a primary thing, or whether it is secondary to the abdominal discomfort and the subconscious fear of what the ulcer may ultimately do.

This patient was put to bed after his hemorrhage and was given morphine freely to quiet his anxiety, to secure rest and to diminish peristalsis. The foot of the bed was raised and hot compresses applied to his abdomen. His blood was typed, so as to be ready for transfusion. His clotting time was found to be normal. A daily blood count was made and the blood pressure and pulse rate frequently recorded. For three days he was given nothing by mouth. In order to prevent dehydration, he was given, by a Harris rectal drip, 50 cc. of Karo syrup in 240 cc. of isotonic salt solution. On the fourth day, he was given two ounces of thin farina gruel every hour. The next day we added two ounces of diluted and sweetened orange juice. On the sixth day he also received strained vegetable soup. Later on, thin custards were given. He was kept on this diet, gradually increasing the amounts, until he was getting about 1,200 calories a day. For medication, he was given a powder containing 10 grains (0.65 Gm.) each of magnesium oxide, sodium bicarbonate and calcium carbonate, every four hours. In the following two weeks, the additions to his diet included boiled milk, soft eggs, cereal puddings, salisbury steak and vegetable purees, bringing his daily intake up to 2,500 calories.

What shall we do with this patient now? He feels well and has no distress whatever, but he still needs prolonged treatment. He is intelligent, cooperative and does not have to work. He refuses to consider operation, although I believe a gastroenterostomy would be the best treatment for him. Therefore, he should be instructed about the symptoms of hemorrhage and perforation and should be warned to seek attention at once if they should occur. We will give him the "ambulatory ulcer diet" of our hospital. This is a balanced, smooth diet, with an adequate vitamin content, furnishing three small meals and three lunches daily. The vast array of ulcer diets is confusing. I have used the Lenhartz, Sippy, Mills, Smithies and Coleman diets, and while they all differ in the relative amounts of protein, carbohydrate and fat, they are alike in that the patient is fed smooth foods, is fed often, and is kept at rest during the cure. It is

(Continued on page 139)

CLINICAL · NOTES
AND
PRACTICAL · SUGGESTIONS

Treatment of Gonorrhea in Women

ON August 6, 1923, a young woman called me. I found her in bed, suffering intense pain in the pelvis, with elevated pulse rate and temperature, and on examination found a tubal abscess with a history of gonorrheal infection.

She had first gone to a local physician, who told her she did not have gonorrhea. He made some local applications, followed by a tampon, and in the course of two or three days she returned to this physician complaining of pain in the pelvis. The physician then examined her again and told her then that she had gonorrhea and had a tubal abscess and that she would have to be operated upon. She went to two other physicians, who told her the same thing, the last one stating that she had an abscess as large as his fist. My examination verified the diagnosis of these physicians.

I reduced the acute inflammation, by long-continued hot douches and detergent tampons, sufficiently that within a few days she was able to come to my office. I then began treating her along the lines that I have since used in similar cases, with universally good results in every case. I swabbed the vagina, cleansed the cervix of all secretions, and then injected from 5 to 10 cc. of Mercurochrome, 10- percent, well up to the fundus of the uterus, followed by thorough swabbing of the entire vagina and about the introitus with the same solution.

In this case there was no reaction whatever. I gave this treatment every day, combined with the daily, long-continued hot douche, omitting it of course during menstruation. By the end of six weeks there was no trace of the abscess, and repeated slide and culture examinations failed to find any gonococci. I saw this young woman two years ago, and she told me that she had never had any evidence of the infection since I discharged her.

From that time on to the present I have treated a large number of cases similar to this, where there was involvement of the tubes, with equal success.

There is one precaution I have learned to observe, and that is to feel my way in the strength of the solution used in the uterus. In the beginning I used a 10-percent solution in all cases, and it was but a short time until I found one that had such intense uterine colic from it that I had to resort to a hypodermic injection of morphine to relieve it. Since that time I have begun with 5-percent solution, gradually working up to the 10-percent if possible. I have found cases where I could not go beyond 5-percent, but even in these I have had the same results.

Because of uniform results, I have never had to adopt the chemotherapeutic treatment used in men, previously described in this journal[1]; but I do add to it the intracervical diathermy treatment, according to Corbus[2], preceded by swabbing of the cervical canal with 10-percent mercurochrome, for five or six treatments where I am not successful in clearing up cervical infections with the Mercurochrome alone.

I believe this treatment is effective in every case of gonococcic salpingitis where the tube is open. Where the tube is occluded, it is doubtful whether it is effective until such time as the occlusion is

removed. There is no explanation for the resolution of an abscess of a fallopian tube by injection of a solution into the uterus, except on the theory that the solution enters the tube. Where this obtains, every case of salpingitis is susceptible of cure.

In a former article[1] I described a chemotherapeutic treatment originated by McDonagh, with some modifications of my own, in gonorrhea. At that time I was using milk injections intramuscularly. Notwithstanding the fact that I was cautious in endeavoring to determine that my needle was not in a vein, I produced two nitritoid reactions, since which time I have been using typhoid-paratyphoid bacterin intravenously, beginning with 50 million and increasing by 50 million at each injection, given every other day. Of course there is a reaction from these injections, with chill and fever, beginning within two hours, resulting in increased leukocytosis similar to the sequence of milk injections.

Since using this form of treatment I have had no complications except in one patient, who developed epididymitis. I can explain the exception in no other manner than that it was due to extremely low resistance, together, perhaps, with an extravirulent infection. Out of 87 cases treated, this would be 1.15 percent. Pelouze, with his mild form of treatment, has 2 to 5 percent, and different authorities state the percentage of incidence of this complication at 10 to 30 percent. Any form of treatment that will reduce the percentage of this complication presents evidence of accomplishing something that the other methods do not.

I have been using, in some instancts, the Pelouze local method; i.e., irrigation with 1:5000 potassium permanganate solution, followed by 5-percent Argyrol (mild silver protein) injection, held for five minutes, once daily. This I do for cleansing purposes and to impress upon the patient that I am doing all than can be done to relieve or cure him, although I do believe that the gentle methods outlined by Pelouze stimulate the bactericidal and bacteriostatic properties of the urethral mucosa and so assist the modified McDonagh method, which is aimed at stimulating the recovery powers of the deeper tissues.

To emphasize the fact that the old methods of treatment have not given satisfactory results, I want to say that, after the publication of my former article, I received letters from more than sixty physicians, in nearly every state of the Union, asking where the remedies could be obtained, many of them making statements showing dissatisfaction and disgust with the ineffectual urethral methods of treatment.

G. M. Russell, M.D.
Billings, Mont.

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The Fight Against Diphtheria

AFTER the diagnosis of diphtheria is made, every case should be reported immediately to the health officer, who will see that the patient is properly isolated and that the necessary precautions are taken at the bedside. The patient should remain in isolation until two negative nose and throat cultures, taken at 24-hour intervals, shall have been obtained. Such restrictive measures sometimes seem rather harsh to some parents, but to be content with less than this means the possibility of other cases developing. School children should be taught the dangers of such common practices as putting their fingers into the nose and mouth, of using common drinking cups and towels, and of placing anything in their mouths except food, water and the toothbrush. The simple and inexpensive procedure of washing the hands before eating should be the universal practice among all school children. Drinking fountains should be so constructed as to prevent the interchange of saliva. The common dipper often leads to diphtheria.

Most of the cases of diphtheria occur in the age group under five years. It is practically impossible to teach this group the principles of personal hygiene; consequently, immunizing measures are essential in this group. Science has produced two successful active immunizing agents against diphtheria—toxoid, and toxin-antitoxin mixture. As far as is known, the immunity produced by these agents continues during the life of the individual. All parents should be urged to see to it that the preschool child, from six months to five years, is immunized by means of two doses of toxoid. Recent experiments have revealed that toxoid will produce im-

munity in a higher percentage of cases than does toxin-antitoxin—90 to 95 percent of the cases, as revealed by a Schick test made six months after the last dose.

For school children it is recommended that all under the age of seven years be given two doses of toxoid, with an interval of one month between doses. Older children should be Schick-tested before immunization and the susceptibles only immunized with toxoid. From four to six months after the last dose, all may be Schick-tested again, when more than 90 percent will be found to be immune. The small number still susceptible should be reinjected. As diphtheria usually occurs during the autumn months, this immunization should be done in the spring, in order to allow time for the development of immunity.

Since available statistics reveal the fact that the majority of deaths from diphtheria occur in the preschool age, it is imperative that the younger children receive this preventive treatment. In this particular phase of the work, the family physician can render a very valuable service. Every parent is urged to let the baby's first birthday present be a complete protection against diphtheria. It should be remembered that, as a general rule, the younger the child the less the reaction from the immunizing agent, and also the more likely is the child to die if he should develop diphtheria. Family physicians are urged to administer toxoid to the young children in a routine way, as a diphtheria preventive, as they now use silver nitrate to prevent blindness. When such a practice becomes general, then, and not until then, will the incidence of and death rate from diphtheria be brought to an irreducible minimum.

U. S. PUBLIC HEALTH SERVICE
Washington, D. C.

Social Insurance and Democratic Government*

ALL forms of social insurance are contrary to the spirit of democratic government, They destroy individual incentive, initiative and self-reliance. They substitute paternalistic control for independence of thought and action. We pride and congratulate ourselves on living under a democratic form of government, but most of us fail to realize that we are slowly but surely drifting away from the true democratic spirit in government; that we are gradually substituting a hybrid form of government—a cross between bureaucracy and socialism. Personally, I am a firm believer in democracy and feel sure that many of our present ills are the direct result of having already deviated too far from the fundamental principles of that form of government.

Individual responsibility is the foundation of democratic government. If a nation does not educate its citizens to individual responsibility, it will soon have no one capable of assuming public responsibility. Slowly, through the ages, the common man has arisen from chattel slavery and serfdom to independence, freedom and personal liberty, and now some well-meaning but misguided people want to undo all this. They want to enslave him again, making him, in fact, a bondsman of the State. Organized society is forever forging new chains with which to shackle the free development of its members. It is forever meddling with the private affairs of its citizens. One of the best illustrations of this statement is found in a recent survey of the Citizens' Bureau of Milwaukee, which found that that city is engaged in approximately three hundred different functions, one-fifth of which have been added during the last sixteen years. Milwaukee is no worse in this respect than many other cities in this country. Add to this the activities of the county, state and Federal governments, and we find an explanation of the following fact: "In a period in which the population of the United States has increased ten percent, the number of persons holding civil office has increased forty percent and the amount paid in salaries has increased one hundred and fifty percent". Thirty years ago, one person in every forty-five was in government employ, while now one in every twelve is so employed.

"It is a profound mystery why the people of the present generation should so violently run after the very things their forefathers so violently ran away from in 1776. One of the chief indictments of King George, set forth in the Declaration of Independence, reads: 'He has erected a multitude of new offices and sent hither swarms of officers to harrass our people and eat out their substance.'"

In a recent article, Dr. Harry Emmerson Fosdick makes a statement that seems par-

*This is the second of a series of articles on social insurance—ED.

ticularly suitable in this connection. He said, "Many of those in society who are dissatisfied with present conditions know what they want to get away from, but they do not know whither they are going". I would add, "nor do they seem to have any clear idea as to what they want". Before we adopt new laws we should make reasonably sure that such laws will not introduce new and greater evils than they are expected to cure, that they can actually be enforced, and that they are not likely to be abused in their administration.

A far-reaching innovation such as social insurance must be viewed from many angles. We must consider its effect upon the general public, the insured, the employer and the medical and dental professions.

If we are deliberately trying to get away from the democratic form of government, having a definite objective in view; and if we are reasonably certain that the goal for which we are headed is worth while and is going to result in general social and economic betterment, an experiment with social insurance might be justified; but, even then, it is well to weigh and consider carefully what the wise founders of our government had to say on this important subject. I quote from the Declaration of Independence, "Prudence, indeed, would dictate that government long established should not be changed for light and transient reasons". If we as a nation are aimlessly drifting, as we seem to be, we are almost sure to get into serious trouble. I believe that I shall be able to show conclusively, in future articles, that, in those countries in which social insurance has had prolonged and extensive trial, it actually has had serious consequences.

EDWARD H. OCHSNER, M.D.
Chicago, Ill.

Hasty Diagnosis

A MAN, about forty years of age, developed a vesicular eruption on the inner surface of the prepuce. He consulted a physician, who informed him that he had contracted syphilis and immediately instituted treatment, in the form of intravenous injections.

In the meantime, an eruption had occurred in the patient's family, as a result of the news of the contagion. The man had had no extramarital relations, and consequently advised his wife that she was the source of his infection; with the result that family ties were violently strained, even to the breaking point.

The wife insisted that an examination be made by her family doctor, and the husband consented. The condition found was a typical case of *herpes progenitalis*, which promptly cleared up with the application of zinc oxide ointment, and familial harmony was again restored.

R. S. MACARTHUR, M.D.
Los Angeles, Cal.

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[A physician who jumps at conclusions in this reckless manner shows such poor judgment that he is not qualified to practice medicine. A knowledge of anatomy, chemistry, pathology and the other basic sciences, no matter how complete, is not enough to make a clinician. Patients are *human beings*, and no man who does not understand the reactions of their emotions, their minds and their souls is fit to minister to their health and welfare. Besides a microscope and a stethoscope, the practitioner of medicine requires a human heart, full of patience and wise understanling.—ED.]

A Plea for Assistance

I *RECEIVED* today a most pathetic letter from Doctor R. S. Short, of Weirsdale, Florida, which is self-explanatory.

I forget who it was, but in old England a poor wretch was being led to the gallows and some high dignitary exclaimed, "But for the Grace of God, there goes Thomas Jones"—meaning himself. This is as true today as it was when uttered hundreds of years ago. Any of us may be on top, or think we are on top today, and in the twinkling of an eye any of us may be in far worse plight than this poor Doctor Short.

I think we Physicians ought to answer this pathetic cry. I am doing so, and many physicians will be able to help in a substantial way, if this poor old doctor's unhappy plight is but brought to their attention.

Am I asking too much, to ask if you

will be good enough to publish in the columns of CLINICAL MEDICINE AND SURGERY this plea of Doctor Short, in hope that with your wide-flung circulation it will reach many fellow doctors, who will be touched by its pathos just as it has touched me—a cry to his fellow physicians for just a little help to ease the way as the grim shadows begin to fall?

This is the letter:

"Weirsdale, Florida, November 20, 1931.

"J. B. H. Waring, M.D.
6075 Montgomery Road,
Cincinnati, Ohio.

"Dear Doctor Waring:

"Your name came before me in the October number of CLINICAL MEDICINE AND SURGERY.

"I am making an appeal to a few interested doctors for some small aid.

"I've been here for over a year, having come from Kentucky.

"I was in the Seaton Hospital, Cincinnati, about 13 or 14 years ago, where I lost both legs with tuberculosis of the bone. It runs all the time to my stomach and liver. Gives me great trouble.

"It got so cold in Kentucky I could hardly breathe or be kept worm.

"The climate is good here, but this winter I can't buy food to keep from starving. The doctors helped me from Cincinnati last year, but the people here don't aid one from another State.

"I am almost helpless, and will be 75 years old the 15th of March next.

"My wife and I would accept second-grade clothes — pants, dresses, shirts or underwear.

"Fraternally yours,
"Dr. R. S. Short."

I am passing this on to the readers of CLINICAL MEDICINE AND SURGERY, in the hope that some of them will be moved to help this unfortunate physician.

J. B. H. WARING, M.D.

Cincinnati, O.

Send for your copy of "Who's Your Health Banker." Ready now.

Your splendid journal in my opinion has no peer among our medical literature in the practical way it keeps its readers abreast of the times.—F. W. P., M.D., F.A.C.S., Waterloo, Ia.

Foods In An Emergency*

THIS winter will be a time of dire emergency, when many families will not have the money to provide adequate and satisfactory food for their children and themselves. What shall be done in such an emergency?

The guiding principle should be to provide those nutritional essentials of which a shortage tends to permanent injury, and to do this (while necessary) even at the cost of a sacrifice of other features of the dietary which are normally desirable but not absolutely essential. Let no one be misled by the extravagant phrase "deadly monotony." No deaths are ever caused by monotony of diet, if the diet, however simple and cheap, provides the actually necessary nutrients; while shortages of these nutrients do cause all-too-many deaths, if not directly, then by lowering the resistance to disease.

The food problem of the unemployment emergency presents itself primarily in the form of the question, What best to do with an inadequate amount of money?

Advice may, therefore, perhaps best be given in terms of the spending of such money as is at hand. One suggestion which seems to have been widely useful, first formulated, I think, by Miss Lucy Gillett, is:

"Divide the food money into fifths:
one fifth, more or less, for vegetables and fruits;
one fifth, or *more*, for milk and cheese;
one fifth, or *less*, for meats, fish and eggs;
one fifth, or *more*, for bread and cereals;
one fifth, or *less*, for fats, sugar and other groceries."

It will be noted that this does not propose invariable division into fifths, but indicates the direction which variation may wisely take—one fifth or more for some groups; one fifth or less for others.

When shortage of money forces expenditure for food to an abnormally low level, more than one-fifth (perhaps one-third) should be spent for milk in some form; and the suggestion of one-fifth for fruit and vegetables should, if possible, be maintained, but with selection probably limited to the cheaper sorts, so as to get the most

*Adapted (with permission) from an article in *Child Health Bulletin*, Nov., 1931.

food value for the money; at least one-fifth (of the reduced expenditure) may well go for breadstuffs and cheap forms of cereal, since a penny spent here will go farthest to meet the actual pangs of hunger; the greater part of the retrenchment should fall upon the other two fifths of the above grouping. One can forego flesh, fish and fowl, and sweets, and most of the sweetened and shortened products of the bakery, and most of the miscellaneous foods bought in the grocery, if one gets enough of milk in some form and of some fruit or vegetable to provide the absolutely essential mineral elements and vitamins, and if, to these foods, enough breadstuff be added to prevent actual weakness from hunger. Almost always the other foods are less economical in meeting these absolute nutritional needs.

Let retrenchment of expenditure take the form, first, of foregoing the purchase of the foods of other groups, and next of selecting the cheaper or cheapest forms or articles within each of the three groups just mentioned as essential. This may involve some shocks to prejudices and even to what in normal times we rightly regard as standards; but we are dealing here with the question of meeting a dire emergency. From certain standpoints two forms or kinds of milk may seem worlds apart; but any kind of milk is nutritionally more like any other kind of milk than is any other food. A crisp green vegetable or a juicy fruit may seem much preferable to a potato; but with expenditure forced to a sufficiently low level, the cheapest vegetable to be had can carry the nutritional responsibility for the whole group of fruits and vegetables during an emergency period.

If there are times and places of such dire destitution that sacrifices must be made even among the three bare essentials of bread, milk and some fruit or vegetable, each in the cheapest available form, what then?

Shall obvious hunger and a starved appearance lead to the crowding out of milk by bread because a penny spent for bread goes farther to still the pangs of hunger? To go too far in this direction is to incur the even greater tragedy of the life-long injuries which result from the "hidden hunger" of the mineral and vitamin deficiencies. "Milk builds bone and muscle better than any other food." And more than this, milk is both the cheapest and the surest protection from the nutritional deficiencies which open the way to diseases and life-long injuries to health, happiness and working efficiency.

"The dietary should be built around bread and milk." The lower the level of expenditure, the more one must forego other foods and concentrate effort upon providing these two, supplemented by a little of some inexpensive fruit or vegetable.

DR. HENRY C. SHERMAN,
New York City.

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[The work of the White House Conference on Child Health and Protection did not end with the great meeting in Washington, more than a year ago. It is still going on.

In addition to publishing articles in various periodicals, the authorities of the Conference are prepared to distribute, at a nominal cost (one cent each in lots up to 25 copies; less in larger numbers), through physicians and other agencies, a very instructive chart, prepared by Lucy H. Gillett, showing in graphic form the proper distribution of the food items in a reduced diet. Write to Aida de Costa Breckinridge, 450 Seventh Ave., New York City, for a sample and further information. —ED.]

Gastrointestinal Symptoms Masking Acute Infections of the Respiratory Tract in Children

MANY cases of pneumonia in infants may readily be mistaken, in their early stages, for acute enterocolitis. The vomiting, diarrhea, and sometimes convulsions, often so predominate in the clinical picture that the true nature of the disease may be overlooked.

The physical findings in the chest in such cases are frequently difficult to elicit. Cough may be absent or so slight as to escape notice. In a few days, as the disease progresses, the morbid changes in the lungs become more evident, and this circumstance is likely to give rise to the opinion that the original intestinal infection has become complicated by a secondary pneumonia.

The problem of differentiating an acute intestinal infection from such pneumonias

has no easy solution. The environmental conditions at the time of onset may be of some help in determining the true nature of the disease in these early stages. If other members of the family, especially the older ones, complain of similar gastrointestinal symptoms or have previously given evidence of having had a diarrhea, there exists, at least, grounds for surmising that the case in question is of a similar nature. In pneumonia, also, there is likely to be more prostration and a higher respiratory rate, at the onset, than in the simple paracolon and colon infections of the intestine. In all doubtful cases, however, it is well to be mindful of a possible pulmonary focus and to take care that proper supportive treatment is instituted. Such cases should be carefully observed until the fever has fully disappeared and danger of a relapse has passed.

Acute nasopharyngitis or tonsillitis may, likewise, manifest itself, at the onset, by vomiting and diarrhea. Mariott has pointed out that convulsions in children are more likely to be caused by acute tonsillitis than by acute indigestion, contrary to the common impression. Swabbing the pharynx with a colloidal silver solution, he says, will do these cases more good than drastic purgation.

A few nights ago, I was called to see a boy, nine years of age. He had been having severe diarrhea since early in the evening, but no vomiting, no pain and only a slight fever. The next day his fever rose higher, the tonsils appeared inflamed, swollen, and marked with the numerous white patches of acute, follicular tonsillitis. This case responded well to very simple treatment; rest, restricted diet, a carminative tablet containing one grain (65 mgm.) each of phenyl salicylate (salol), bismuth subgallate and cerium oxalate, and 1/5 grain (13 mgm.) of ipecac. No local treatment was given. In three days he was back at school and as active as always.

There *may* be such a clinical entity as "intestinal flu". I have noticed, however, that since this expression has come into popular use, we do not hear so much of "ptomaine poisoning" as we formerly did. I have seen quite a number of cases with intestinal symptoms that could be put in the same category with the one just described. It is hard for me to recall, on the other hand, any influenzal cases in which the symptoms indicated that the infection was localized in the intestinal tract. I have seen some cases of appendicitis and of biliary tract infection, which may have developed as a complication of or sequel to acute influenza, but these do not fit into the symptom complex usually described as "intestinal flu".

G. J. WARNSHUIS, M.D.,
Cedarburg, Wis.

(Continued from page 132)

advisable to prohibit alcohol, condiments, tea, coffee and tobacco.

He will be given his alkaline powder two hours after his meals. Whether or not such drugs promote the healing of ulcers may be debatable, but my experience leads me to believe that these patients are much more comfortable if moderate doses of alkalies are given.

Will this man have a permanent cure? Time alone can tell; but, if he cooperates well, he will be relieved for a long time and, we hope, permanently.

214 Capitol Theater Bldg.

MENTAL HYGIENE IN FAMILY LIFE

The physician of today who ignores the emotional aspects of the patient's personality may be ignoring the most important factors in the condition. Physical, organic, toxic, infectious and hereditary factors must, of course, be taken into account when important, but in nervous conditions especially, or in cases of marked unhappiness and inefficiency, whether in vocations or at school, personality reactions are most important. If the psychologic approach to personality difficulties or nervousness is important, there is little need to emphasize the value of mental hygiene in family life. — DR. F. P. NORBURY, *of Jacksonville, Ill., in* Illinois M. J., Oct., 1931.

THE · LEISURE · HOUR

The Staff of Aesculapius

(After the Manner of Kahlil Gibran.)

●

AND a Physician said, Speak to us of Healing. And the Prophet answered and said:

You heal, not for fees nor self-sought places of esteem, but in urge to.tha deep spring of love within the heart of every man.

Before you await the gifts of knowledge and of skill, that your love may flow in well-trenched brooks, nor be submerged within the sand;

Therefore weary not in your striving for knowledge of your art and sureness of your eye and hand,

For that which to you now seems useless, tomorrow is the foundation stone of your Temple;

And in that Temple may you be a true Priest of your Faith, with tireless energy for days of loving service which know not hours of entrance nor of end,

With patience which allows no irritance, and hope which admits no defeat

Remember, Oh Physician, that the ills of mind and body balance the scales of suffering with fevered wound and broken body;

Therefore look you to the whole man, as well as to that part of him you see and touch,

For the help you best can give him may speak more of sunsets and of love of neighbors than of surgeon's knife or apothecary's draught.

And may the Art of Healing never hide from you the one you heal, nor lose for you the sufferer within the sea he struggles in,

But may your every gift call out the peak-thrust of your effort, and be given him who calls for it as if to your beloved;

For in the Words of God there is neither race nor creed nor caste, but only pain-afflicted children with arms out-thrust to seek His soothing mercy from your hands.

—JOHN R. RODGER
U. of M. Medic., '33.

ANN ARBOR, MICH.

Easy

Down in Ohio many years ago a small boy was walking along a country road. A man in a wagon, going in the same direction, stopped and asked the boy if he wanted to ride. The boy climbed up on the seat and the man discovered that he had acquired a very loquacious passenger.

After they had driven a short distance he asked the boy his name and received the answer that he was John Miller's boy. The boy noticed that this information made no impression and asked, "Don't you know John Miller?"

"No," replied the man.

"You don't know John Miller?" persisted the boy.

"No, I do not know John Miller."

"Well, that's funny, I know him just as *easy*."

EMMET KEATING

A Tragedy in Twelve Words

Algy met a bear.
The bear was bulgy.
The bulge was Algy.

Do They Pay It?

The committee on the costs of medical care tells us that illness costs the American people three billion dollars a year, or some such figure. Does that mean the bill is three billion, or that is how much is paid? —*American Stories.*

The Answer is Easy

A group of pilots were buzzing about something or other as the flight commander approached and several times he caught the expression, "the last word in airplanes."

"Well," he said as he reached the group, "what is the last word in airplanes?"

The group chorused: "Jump!"

A Desperate Case

Druggist: "How's your wife today?"

Customer: "Oh, she can't complain."

Druggist: "I didn't know she was as ill as that."—*The Doctor.*

The Old-Time Physician

Though the future may flout them and scout them,
The world had been sadder without them;
Though they rest in their graves without glory,
Though they live not in song nor in story,
No prophet, no priest, had a mission
More sacred through all the dumb years
Than that of the old-time physician,
Whose dust we bedrew with our tears.

—DR. JAMES NEWTON MATHEWS.

Gift of Tongues

A young lad of six years got to pondering about Biblical matters recently, and came to his mother to ask her exactly why Christ was killed. She happened, however, to be busy at the moment; moreover, she didn't want to get him embroiled in philosophical affairs too early in life. "He was killed," she explained, "because the people didn't understand Him," and thought she'd got away with the thing rather neatly—until a day or so later. Then she came upon him in the nursery solemnly explaining to a playmate that Christ was killed because He couldn't speak English.—*The New Yorker.*

Retroactive

A Scotchman was told by his doctor that his wife should have had her tonsils taken out when she was a little girl. He had the operation performed—and sent the bill to his father-in-law.—"Scotch," pub. by Simon and Schuster.

Home Treatment

"Good morning, Mrs. Kelly," said the doctor, "did you take your husband's temperature, as I told you?"

"Yes, doctor, I borrowed a barometer and placed it on his chest; it said 'very dry,' so I bought him a pint o' beer an' he's gone back to work."—*Boston Transcript.*

The man who goes through life looking for a soft thing can find it under his hat. —CHARLES R. SHEPHERD.

DIAGNOSTIC · POINTERS

Sore Throat

Ordinary tonsillitis is a mild form of septic sore throat; or the latter is a fulminating form of tonsillitis, due to unusual virulence of the infecting streptococcus or a lowered resistance in the patient's organism. If polyarthritis follows it is due to the same organism found in the throat. —Dr. Isadore Pilot, Chicago.

Influenza and Septic Sore Throat

In influenza, the inflammation in the throat is rather mild and the pulse is relatively slow: In septic sore throat, due to *Streptococcos epidemicus, occurring in tonsillectomized patients,* the throat is intensely inflamed and the pulse is rapid. — Dr. Isadore Pilot, Chicago.

Early Diagnosis of Whooping Cough

The leukocyte count is a very dependable support of the early diagnosis of whooping cough. If more than 12,000 leukocytes are counted in the blood of a child without fever, without catarrh or suppuration, whooping cough may be suspected. Increase of the leukocytes during the following days is confirmatory. Treatment with vaccine prepared from Bordet-Gengou bacilli cultured on blood agar and killed by carbolic acid is recommended. —Dr. P. Leitner, in *Jahrb. f. Kinderheilk.,* Nov., 1930.

Alcohol Addiction

The man who really lives well is the one who confines his drinking to meals, preferably the evening meal, or whenever the day's work is done.

The toper, on the other hand, prefers to take his alcohol on an empty stomach, and finally eats very little food at all. Upon noting the first tendency in this direction, one will do well to regard it as a sign of impending addiction and resolutely put drink aside until food and exercise may be taken again with gusto.—Chas. D. Snyder, in *Am. Mercury,* Mar., 1931.

The Leukocyte Count in Pneumonia of Children

In a series of 100 children with pneumonia it was found that the mortality was inversely proportional to the leukocyte count, except in children having over 50,000 cells per cubic millimeter.—Dr. H. F. Meyer, in *Am. J. Med. Sc.,* Feb., 1931.

Cultivation of "Common Cold" Virus

The recently reported successful cultivation of bacteria-free pathogenic nasal filtrates, by Dochez and his associates, of Columbia University, strengthens the growing conviction that "common colds" are not due to any microorganism thus far included in commercial vaccines, but to an unknown filtrable virus or group of viruses. —Editorial, *J.A.M.A.,* Aug. 15, 1931.

Symptomless Acute Mastoiditis

It is recognized clinical observation that one of the most reliable signs of acute mastoiditis, if present, is a sagging or bulging of the posterior superior wall of the osseous meatus, where it abuts on the tympanic membrane. This sagging may be slight or so marked as to obscure a view of the drum. It may be the only sign or symptom indicating the presence of a suppurative mastoiditis or even an intracranial collection of pus.

The patient in such cases usually has had an attack of acute otitis media, with or without an actual ear discharge. Only on otoscopic examination can the bulging

or sagging of the wall of the osseous meatus be observed, and it must be looked for; observers only see what they search for. Evident symptoms often become apparent only when meningitis is in full swing. — Dr. N. Asperson, in *Lancet*, Feb. 14, 1931.

Asphyxia of the New-Born

There are two clinical types of asphyxia, the blue and the white.

Comparison of blue or livid asphyxia and white or pallid asphyxia:

Blue Asphyxia	White Asphyxia
Condition not dangerous.	Dangerous
Blue or purple in color; mottled;	White; lips blue; waxy.
Pale around lips; Injected conjunctivae.	
Looks alive.	Looks dead.
Jaws closed.	Mouth open.
Rigidity of muscles.	Flaccid.
Sometimes twitching, if cutaneous stimulation.	No movement.
Heart strong.	Heart weak, slow, is only sign of life.
Response to cutaneous stimulation, rapid—gasps, cries becomes pink.	No response to cutaneous stimulation. May gasp, but remains white. Shallow respirations.
Lives.	May revive. May live and die in a few hours.

Blue asphyxia may merge into white if pulmonary respiration is not established.—Dr. Louise McIlroy, of London, in *Practitioner*, June, 1931.

A Diagnostic Triad in Syphilitic Aortitis

The diagnostic triad of syphilitic aortitis consists of angina pectoris, a negative carotid sinus (vagus) reflex and a rapid blood sedimentation reaction.

The carotid sinus reflex is elicited by pressing the thumb over the common carotid artery at the level of the thyroid cartilage.

At this point the vessel bifurcates into its internal and external branches, and a slight bulging of the artery, called the "carotid sinus," may be felt.

The heart rate is counted for 10 seconds, then the sinus is compressed against the firm tissues of the neck for 10 seconds and the cardiac frequency is again determined. Similar counts are made for the following two 10-second periods. The reflex is positive if there is a distinct slowing during the carotid compression.—Dr. C. S. Danzer, of Brooklyn, in *Ann. Intern. Med.*, July, 1931.

Reappearance of Chicken Pox Lesions Following Administration of Diphtheria Toxin-Antitoxin

A boy, who about a month previously showed a rash diagnosed as chicken pox, received an immunizing dose of diphtheria toxin-antitoxin in the gluteal region. A week later he received a second injection in the same area. The next day he developed typical lesions of chicken pox over the lower part of the back, both hips and the posterior surface of both thighs.

The case calls attention to the relation between the exanthems and the reactions to the injections of bacterial toxins.—Drs. W. M. Donald and W. L. Brosins, of Detroit, in *J.A.M.A.*, June 27, 1931.

Exercise and Heart Strain

During violent exercise, stress of the heart is inevitable, over-stress is conceivable, but strain, as I visualize it is not an affair of the heart, but of the body as a whole. As the result of a particularly severe effort or of a succession of repeated, if less severe, efforts, an alteration occurs in the body—as an assumption, in the nervous system—an alteration which is beyond detection by any means of examination, but comparable to the molecular dislocation of the particles in a piece of metal; e.g., a steel spring.

Athletes, particularly those who are celebrities, live in an atmosphere of incessant nervous excitement and strain. In intensive competition, a nervous condition is induced which is only indirectly related

to the physical exertion. The continuous flow of nerve impulses to the muscles, the complex processes involved in coordinating skilled movements and in focussing attention, together with such mental factors as excitement, apprehension anxiety and judgment, must involve a considerable expenditure of nervous energy. — Dr. Adolphe Abrahams, in *Practitioner*, (Lond.), May, 1931.

Diagnostic Value of the Electro-Cardiograph

Though we may, by clinical methods, in many cases make a shrewd guess at abnormal conditions occurring in the heart muscles, yet it is only by means of graphic records, preferably with the electrocardiograph, that an exact diagnosis can be made. —Dr. G. E. S. Ward, of London, Eng., in *Practitioner*, (Lond.), May, 1931.

Contraception and Sterility

After contraception has been practiced for a number of years, the woman usually remains sterile, after the practice is stopped, for a period approximating 1½ to 2 months for every year of contraception, after which fertility is restored.—Dr. Raphael Kurzrok, New York City.

Rapid Measurement of Red Cells

The measurement of erythrocytes, in connection with the study of various types of anemia, is important and different methods have been devised to make this determination.

In *Am. J. Dis. Child.*, Apr., 1931, Drs. H. R. Sauder and J. A. Toomey, of Cleveland, describe a method of measuring red blood cells, the principle of which involves the projection of the microscopic image of the cells (in a smear) to a suitable screen. The projection apparatus most ideally suited to this work is the Bausch and Lomb euscope, but any good microscope with substage condenser can be adapted to this apparatus. The measurement of the magnified cells on the screen is accomplished by means of a special calibrated rule.

Stitch Abscess

It is my personal opinion, based on clinical observation, that postoperative wound infections—socalled "stitch abscess" —while it is conceivable that they can be caused, and even in a small percentage of cases may be caused by an agent from without, or by the blood stream, are actually caused, in by far the greatest number of cases, by organisms in the tissues and glands about the wound; that these organisms are picked up in the deeper skin structures and planted into the subcutaneous fat; there they fight out the battle with the resisting powers of the patient; when the patient loses the result is, stitch abscess. — Dr. G. S. Van Alstyne, of Chicago, in *Illinois M. J.*, May, 1931.

Meckel's Diverticulum and Intestinal Obstruction

An inflamed Meckel's diverticulum may be the cause of intestinal obstruction and it is rarely diagnosed preoperatively. Two such cases were observed within a year.— Dr. M. T. Green, Ruston, La., in *Tri-State M. J.*, Feb., 1931.

Confirmatory Physical Sign in Ascites

In cases of ascites, when one side of the abdomen is tapped with the finger and the other side is auscultated, two sounds, similar in timing to the normal heart sounds, have been observed. The first sound is caused by the sound wave being transmitted through the fluid; the second is the result of the fluid wave crossing the abdomen and striking against the auscultated side. These two sounds are heard more clearly in thin, tense abdomens, as opposed to flat, soft, flabby ones, and are best heard at the level of the fluid and intestine, as demonstrated by an experiment with a closed rubber bag partially filled with air and water. There seems to be no reference to this auscultatory sign in cases of ascites in any of the standard textbooks. —Dr. J. T. Witherspoon, of New York, in J.A.M.A., Mar. 21, 1931.

Current · Medical · Literature

The Effect of Iron on Blood Formation

In *Am. J. Med. Sc.*, Jan., 1931, Drs. S. R. Mettier and G. R. Minot, of Boston, present a study of the effect of iron (ferric citrate) on blood formation, as influenced by changing the acidity of the gastroduodenal contents in certain cases of secondary anemia.

Data are presented in 10 clinical cases of this type, especially associated with a prolonged defective diet or chronic blood loss, which responded rapidly and excellently to iron therapy (ferric citrate).

The response of the bone marrow to iron, administered daily, first in small doses (0.5 to 2 Gm.), with an alkaline and then with an acid beefsteak meal and followed by a four- to twelvefold increased dose of iron (4 to 6 Gm.), was studied by observing the course taken by the reticulocytes. Responses of reticulocytes occurred following each of the three procedures. The meat was used only as a medium to maintain the upper gastrointestinal contents at an approximately constant pH, and had no demonstrable effect on blood formation.

The responses to iron fed with beefsteak at a high pH were usually slightly less than those that followed a few days later from the administration of the same dose of iron with meat at a low pH. Thus it is concluded, particularly because the same dose of iron fed with beefsteak at an acid pH caused a prompt second response of reticulocytes, that iron is more potent for blood formation when absorbed from an acid than an alkaline medium within the intestinal tract.

The third responses induced by increased doses of iron indicate that the small doses were not optimal and serve to emphasize the importance of optimal doses of iron for patients with anemia that can be benefited by this element.

Milk Sugar in Infant Feeding

In Am. J. Dis. Child., Nov., 1930, Dr. R. W. Jarvis, of New York, reports his observations on 1,000 lactose-fed infants. The lactose was added to the food formula, beginning with 10 Gm. daily and increasing to 100 Gm. (1 level tablespoonful) three times daily.

Lactose was well tolerated in all cases. There was no nutritional disturbance, no habitual anorexia, no habitual constipation, no eczema. Age-weight for age-weight, the lactose-fed infant possesses more living tissue than the infant fed on vegetable sugar.

The lactose-fed infant resembles but does not equal the breast-fed infant in firmness of tissues and resistance toward infections.

Preanesthetics

Discussing his experience with preanesthetic medication in *Brit. J. Anesth.*, Oct., 1931, Dr. S. Rowbotham, anesthetist to the Royal Free Hospital and Westminster Hospital, London, Eng., compares paraldehyde, Avertin, Sodium Amytal, Nembutal and Pernocton.

The author prefers paraldehyde or Nembutal to the others. Except in young children and very old and debilitated patients, paraldehyde alone will not produce unconsciousness.

For adults, Nembutal gives equally good results as paraldehyde and is less worrying to the patient; postoperative restlessness, when present, is usually slight and easily controlled. With Nembutal the author has seen virtually no ill effects. Both paraldehyde and Nembutal are eminently safe in expert hands.

Neothesin—A New Local Anesthetic

A large part of the Oct., 1931, issue of *Med. Arts and Indianapolis M. J.* is devoted to a symposium on a new local anesthetic, Neothesin. This is one of a number of anesthetics investigated by Dr. S. M. McElvain at the University of Wisconsin. After pharmacologic and clinical testing of these, Neothesin was selected as the best. It is claimed that its chief value over procaine is that it produces anesthesia when applied topically to mucous membranes, and at the same time is much less toxic than cocaine.

In the clinical reports here presented, Dr. B. F. Hatfield, of Indianapolis, reports that Neothesin is a practical and desirable local anesthetic for dispensary use; Dr. W. R. Meeker, of Mobile, Ala., states that clinical experience in general surgery is very favorable to the use of Neothesin; Dr. H. M. Trusler, of Indianapolis, has found that, on account of rapid dissociation and elimination from the tissues, Neothesin is safe for subcutaneous infiltration and the injection methods which apply to procaine.

Drs. R. E. Van Duzen, of Dallas, and H. G. Hamer, of Indianapolis, have found Neothesin satisfactory in urologic practice; Drs. F. T. Romberger and F. W. Ratcliff, of Lafayette, Ind., report that Neothesin, clinically, appears to equal procaine for spinal anesthesia, when the latter is used in double the amount and con-

centration; Neothesin in 10 percent topical application gives, according to Dr. E. N. Kune, an excellent and safe local anesthesia for minor electrosurgical operations in the oral cavity; in nose and throat practice, Drs. A. L. Sparks and J. W. Carmack, of Indianapolis, find Neothesin excellent; Dr. J. R. Newcomb, of Indianapolis, after 2½ years' experience, now uses Neothesin very extensively in his ophthalmologic practice; Drs. F. R. Henshaw and associates state that it has been found satisfactory for subcutaneous use in all phases of dental anesthesia; fairly satisfactory results have been obtained from its use for topical application.

Postinfluenzal Cardiovascular Complications

Dr. C. L. Andrews, of Alantic City, in *J.A.M.A.*, Dec: 12, 1931, points out that "grip" is regarded by many physicians as a systemic cold and that patients are allowed to get up much too soon.

Myocardial weakness is a common form of heart defect following "grip;" organic leaks of the valves are rare. Even the mild forms of "grip" offer potential possibilities of myocardial disease and show evidences of lingering infection in the body tissues.

The most effective treatment that the author has found in post-grippal heart troubles consists of rest and tonic doses of digitalis and nux vomica (not with the idea of digitalization) to tone up the heart muscle and vasomotor system.

The Cause of Dental Caries

In *New Zealand Dental J.*, July, 1931, Dr. J. Sim Wallace cites Parmly, who published a book on the subject in 1818, as being one of the first, if not the first, to formulate the purely local origin of dental caries; namely, that it is a disease beginning externally in the enamel and extending inwards, instead of originating from constitutional or internal factors.

Cost of Medical Care not Excessive

In *United States Daily*, Sept. 5, 1931, Dr. A. J. McLaughlin, Med. Director, U.S.P.H. Service, declares that the cost of medical service has not increased out of proportion to the cost of other services. The best medical care is worth all that it costs.

Dr. McLaughlin further states that, if State Medicine in some form is to be avoided—and he regards it as a miserable makeshift, un-American, ultra-paternalistic and destructive of self-respect—the medical profession must organize for service, must establish adequate diagnostic and treatment clinics in all population centers, with a sliding scale of fees suitable to the ability of patients to pay, and *must practice preventive medicine.*

Dr. McLaughlin asserts that "an exaggerated sense of "ethics" makes many physicians shrink from anything like business organization, yet such organization is essential if State Medicine is to be prevented.

The present-day medical graduate is being taught the principles of preventive medicine and the most modern diagnostic methods. He will not practice in small towns because he does not find there the facilities for practice that he has been taught and cannot individually afford them. Such can only be provided by clinics in easily accessible centers of population.

Vitamin A as an Anti-Infective Agent in Puerperal Sepsis

It has been asserted that vitamin A has both a prophylactic and therapeutic power against infection, especially septicemic infections.

In *Brit. Med. J.*, Oct. 3, 1931, Drs. H. N. Green, D. Pindar, G. Davis and E. Mellanby give the results of an investigation made by them into the clinical aspects of this question in regard to puerperal septicemia.

The study relates to 550 pregnant women attending the out-patient department of the antenatal clinics of Sheffield, Eng., and subsequently delivered in hospital.

Alternate women were given an extra supply of vitamins A and D during the later weeks of pregnancy (usually for one month, but in some cases for a fortnight before delivery). Thus, 275 women received the vitamin supplement and 275 women acted as controls.

Of the vitamin-treated cases 1.1 percent and of the control cases 4.7 percent developed the British Medical Association standard of morbidity.

The results, classified on the basis of duration of pyrexia, also suggest that the vitamin preparation increased the resistance of the puerperal women to infection.

The authors believe that their results indicate that the administration of vitamin A during the last month of pregnancy has diminished the liability to a morbid puerperium. It seems that the incidence of sepsis, particularly in the early period of the puerperium, in which the most dangerous types of sepsis are likely to arise, has been lowered by increasing the vitamin A intake. Vitamin D has little anti-infective action.

Where a diet complete in vitamin A requirements cannot be taken by the pregnant woman for economic or other reasons, it should be supplemented by some preparation rich in vitamins A and D. Cod-liver oil is the cheapest source, but where a dislike to this oil exists, a reliable commercial preparation rich in these vitamins is indicated.

American Doctors in Vienna

Some sidelights upon the value of an educational post-graduate course in Vienna to American doctors are given in an article by Martha Foley and Noah Fabricant in *The American Mercury* for Nov., 1931. Among other things the article suggests that there is practically no supervision of studies, that the American Medical Association of Vienna is non-discriminating as to the status of its members and that the Zeugnis or certificate obtained through the Association is awarded automatically to those who go to Vienna to study, whether they study

or not. This ornate certificate is signed with little or no discretion by Vienna Medical authorities; but those who understand the method place little value on this supposed distinction, which hangs conspicuously in the office of many an American specialist. The American dollar is very powerful just now in medical Vienna.

Diagnosis of Gonorrhea in the Male

As stated by Dr. R. D. Herrold, of Chicago, in *J. Urol.*, Sept., 1931, for the laboratory diagnosis of gonorrhea in the male, single stain smears are sufficient in new infections in the presence of acute clinical symptoms and findings. Negative smears, in the presence of suggestive clinical symptoms, should be followed by further examinations before a definite negative diagnosis is made.

The presence of large numbers of bacteria, with or without typical intra- or extracellular-diplococci in the single stain, should be corroborated during the same examination by a Gram stain. If all findings then suggest a specific infection, it is advisable that a culture should be made. If the culture proves negative, then provocative measures may be used more safely, after which more smears and cultures should be made.

Suspected exacerbations of chronic infections, where smears are doubtful, should not be subjected to instrumentation, massage or provocative measures until after further clinical observation.

Smears and cultures are complementary, and positive smears may occur with negative cultures, and conversely, positive cultures may be obtained in the presence of negative smears.

Gonococci sometimes exist in a saprophytic state and it is here that cultures are of the greatest usefulness.

As a rule, nothing can be learned by serologic methods that cannot be found better by smears and cultures, but serologic tests may be useful in the differentiation of systemic complications, associated with socalled post-gonorrheal infections in the genitourinary tract.

Similarly, skin reactions are inferior to smears and cultures as diagnostic procedures.

In the male, other bacteria that need most common differentiation from gonococci in smears and cultures, are variants of staphylococci and other gram-positive diplococci with similar morphology.

Mental Hygiene and the Medical Profession

In J.A.M.A., Oct. 17, 1931, Dr. L. H. Ziegler, of Albany, N. Y., stresses the necessity of general practitioners of medicine becoming better acquainted with the principles of mental hygiene. Neuropsychiatric patients are far more numerous than is believed.

Institutional psychiatry has been emphasized so much in the past that the average physician has failed, in a measure, to recognize the onset of mental disease: has ignored or even made light of certain milder but, nevertheless, distressing syndromes. The time has come when men practicing medicine and surgery should be more thoroughly informed about what psychiatry can offer, not so much with regard to puzzling diagnostic classification, but by giving the patient the benefit of fair and hopeful therapeutic advantages.

The physician of the future will have more to do with the products of the subtle influences which society, economics and very personal factors exert on the individual, producing syndromes sometimes closely resembling organic disease, frequently associated with it, but which are nevertheless, disabling and distressing. Mental hygiene should be a part of public health movements.

The Anemias of Infancy

On the basis of the study of 50 sick children suffering from anemia, Dr. L. G. Parsons, of Birmingham, Eng., in J.A.M.A., Oct. 3, 1931, classifies the anemias of infancy as follows:

1.—Those due to a defect of nutrition.
   (a) Simple or dietetic anemias.
   (b) Endogenous or constitutional anemias.
2.—Those due to infection.
3.—Those due to abnormal hemolysis.
4.—Those due to a combination of two or more of the preceding causes.

In the nutritional anemias, the authors stress the therapeutic value of iron and copper. In all cases diagnosed as simple nutritional anemia, they found that iron and a mixed dietary led to a speedy rise in the hemoglobin level, but the iron salt used always contained traces of copper. The authors cite from a recent report of Josephs to the New York Academy of Medicine, on the treatment of infantile anemias: "These results with copper were somewhat surprising. I did not expect them and I do not know what to make of them. The results thus far have tended to confirm the results in the anemia of rats, as first obtained in Steenbock's laboratory. In a number of cases I can say definitely that the hemoglobin formation was accelerated by the use of copper."

The author dwells on the frequency of infantile anemia following infections, especially infections of the intestinal and urinary tracts; of his 50 observed cases, 15 were of this type.

Technic of Obtaining Autopsies

In the Cumberland Hospital, Brooklyn, N.Y., the percentage of autopsies from July 1930 to Jan., 1931, has been increased from 14 percent to about 60 percent by following a systematic method of obtaining the consent of the relatives of the deceased.

As explained in detail by Dr. H. Charache, in *M. J. & Record*, Sept., 16, 1931, a special member of the medical staff is delegated to take charge of the routine of obtaining consent. The principal relative is interviewed at the hospital as quickly as possible after the death. The routine practice includes a sympathetic attitude, a psychologic approach to the subject, the use of different stock arguments, according to the personality of the relative, and the assurance that there will be no noticeable disfigurement of the body. The hospital authorities in touch with the family and the undertaker

must cooperate. The main idea is to convince the relatives that there will be no "cutting up" and that the findings of the autopsy will probably be beneficial to them as well as to others. The "advancement of science" argument should be secondary and the doctor should treat the whole matter as one of ordinary and necessary diagnostic procedure, rather than as a favor.

An Unrecognized Cause of Indigestion

Dr. A. Bassler, of New York, in M. J. & Record, Aug. 5, 1931, points out that the space between the uterus and rectum is the lowest point of the greater peritoneal cavity. In this, coils of the ileum are contained, especially when the uterus is in normal position. In this event, the lower coils slip over the fundus and posterior wall of the uterus and, as can be observed readily in x-ray films, loosely fill the space.

When the uterus is vertical or in retroposition, this fold is somewhat obliterated, but not enough to prevent coils of the ileum from gaining entrance. When sufficient coil or coils are contained in this space and they contain food and are in active peristalsis, a uterus in the posterior position can press upon this section of the intestine and, interfering with its function, can bring on an acute disturbance.

The author has seen 5 cases of digestive disturbances due to such cause.

Metaphen as a Skin Disinfectant

In order to test the validity or otherwise of a statement made by White and Hill, suggesting that Metaphen did not completely sterilize the skin, Drs. J. A. Kolmer and M. J. Harkins, of Philadelphia, give in *Arch. Surg.*, Dec., 1931, the results of a series of experiments carried out by them in the Research Institute of Cutaneous Medicine. The experiments were made in laboratory animals and in human subjects and gave the following results:

1.—The application of a 1:500 aqueous solution of Metaphen to the skin for five minutes was found to be a highly efficient disinfectant.

2.—In confirmation of previous reports, the application of a 1:500 aqueous solution of Metaphen for five minutes, to the disinfected skin of rabbits secondarily contaminated with broth cultures of various organisms, usually resulted in complete disinfection, probably because the bacteria were on the surface of the skin.

3.—The application of a 1:500 aqueous solution of Metaphen to the unprepared skin of human beings for five minutes resulted in complete disinfection in at least from 70 to 75 percent of persons. In the remaining 25 to 30 percent, disinfection was incomplete, probably because of a failure of the disinfectant in aqueous solution to reach and destroy organisms located in the depths of the skin in the time allowed. Metaphen solutions in alcohol and acetone were not tested.

4.—In 95 percent of cases, however, the application of a 1:500 aqueous solution of Metaphen to unprepared skins for five minutes resulted in the complete destruction of staphylococci, which are of most importance from the standpoint of disinfection in relation to surgery.

5.—The degree of bacterial contamination of the skin influenced the degree of disinfectant activity of aqueous solutions of Metaphen.

6.—Subcultures of the skin with swabs into 10 cc. of broth, following the application of 1:500 aqueous solutions of Metaphen, were always positive when inoculated with staphylococci and failed to corroborate the observations of White and Hill in these respects.

7.—However, subcultures of the skin with swabs in 10 cc. of broth, following the application of 1:500 aqueous solutions of Metaphen, apparently transfer sufficient of the compound to prove bacteriostatic for devitalized organisms.

8.—Therefore, in tests of the bactericidal activity of Metaphen on the skin, subcultures should be made in 100 cc. or larger volumes of broth, as advised by White and Hill.

Vitamins in Tomato

H. Steenbock and Inez M. Schroeder state, in *Am. Journ. Nutrition*, July, 1931, that the tomato is generally recognized as a potent source of vitamins A, B and C. Dr. Steenbock and Miss Schroeder, after experiments upon rats in which ophthalmia had been produced by a deficiency diet, concluded that the pulp of ripe-tomatoes from which the skin and seeds had been removed, contains approximatley 32 times as much vitamin A as the clear yellow serum These results indicate that, from a nutritive standpoint, filtered juice is much less desirable than a juice containing the pulp in suspension.

Vitamin D, added to tomato juice in the form of ergosterol, maintained its activity after sterilization and storage for thirteen months at 37 degrees C.

Ethical Publicity

There is a large question in the minds of many physicians as to just what is and is not ethical publicity. The Medical Information Bureau of the New York Academy of Medicine has tried to make a yardstick for measuring this intangible stuff and set down some rules in black and white. The full text of these rules appears in *Med. Economics* for Oct. 1931, where they are epitomized like this:

1.—Don't try to hog the newspaper spotlight with news of your comings and goings; and avoid particularly the playing up of your medical connections, achievements and honors.

2.—If your name appears in connection with health propaganda, make sure the agitation itself is primary, and your name secondary. The same applies to public health education.

3.—In radio broadcasts, be introduced as "Dr. John Jones, Clinical Professor of Medicine at XYZ University"—not "Dr. John Jones, an internationally famous authority. . . ." Keep personal reference to the minimum. Submit radio talks in advance to the publicity committee of your society.

4.—If you are paid to give a commercial broadcast, don't prostitute your name by mak-

ing your address a testimonial for any product. Again, confer with your publicity committee.

5.—If you write an article for a magazine read by the laity, submit it to the society for review before offering it.

The Physician as Writer, Lecturer and Publicist

In an editorial in the issue of Oct. 24,1931, the *J.A.M.A.* cites regulations, made jointly by the Medical Society of the County of New York and the New York Academy of Medicine, governing the ethics of physicians who make public talks or contribute articles to lay publications on medical matters. These regulations are as follow:

1.—A physician shall not directly or indirectly seek publicity for himself tending to call attention to his professional attainments or activities.

2.—A physician shall not issue testimonials or endorsements calculated to promote the sale to the lay public of any product in any way related to health or the prevention and cure of disease.

3.—A physician shall not issue or authorize for publication his photograph in connection with any matter affecting his or her professional relationship with the public.

4.—When reading a paper over the radio, neither the announcer nor the physician should give more than one of his titles nor give notice of his own medical experiences or accomplishments.

Regarding these, the *Journal* remarks that here is taken an advanced and noteworthy step in establishing the relations of modern medicine to the public. The codification provides a basis for study and will do much to establish proper medical education more widely.

Therapeutic Value of Oxygen in Heart Disease

The effects of oxygen therapy in various types of heart disease have been studied by Dr. A. L. Barach, of New York City. In *Ann. Intern. Med.*, Oct., 1931, the results are reported for 8 patients with congestive heart failure due to primary cardiac disease; in 5 cases of cardiac insufficiency developing as a sequel to chronic pulmonary diseases; in 4 cases of acute coronary thrombosis; and in 3 cases of coronary arteriosclerosis with chronic cardiac pain.

In the case of congestive heart failure, the most striking effects observed were: (1) relief of dyspnea and orthopnea; (2) diuresis and disappearance of edema; and (3) a marked rise in the carbon dioxide content of the arterial blood. Other observations noted were relief of cyanosis, increased arterial oxygen saturation, decreased pulmonary ventilation, lowered pulse rate and decrease in blood lactic acid.

In the case of acute coronary thrombosis, life appeared to be prolonged by the inhalation of an oxygen-enriched atmosphere, until the heart was able to recover from its acute functional disturbance. The cases of coronary arteriosclerosis with chronic cardiac pain were relieved by residence in a high-oxygen atmosphere.

These results indicate that oxygen-want plays the primary part in the production of many forms of cardiac dyspnea. The increase in carbon dioxide content of the arterial blood occurs as an adaptative change, which facilitates the elimination of that gas.

The clinical improvement which patients suffering from the various forms of heart failure experience suggests a new employment of oxygen therapy by effective methods in these conditions.

The Barach oxygen chamber and oxygen tent were employed to administer 40 to 50 percent oxygen. In the oxygen chamber a constant temperature and humidity regulation was achieved and in the oxygen tent the temperature was kept below 70 degrees and the humidity below 50 percent. Oxygen therapy will not be successful if types of apparatus are used which do not effectively remove the heat and moisture eliminated by the patient, in addition to furnishing 40 to 50 percent oxygen to the inspired air. The patient is usually kept in such an atmosphere for from 2 to 5 weeks.

Ouabain in the Treatment of Heart Disease

In *The Prescriber* (Edinburgh), Sept. 1931, Dr. E. Podolsky, of Brooklyn, N.Y., summarizes the therapeutic value of ouabain in heart disease. Ouabain is chemically and physically identical with the crystalline principle obtained from the *Strophantus glaber*.

Ouabain is particularly valuable and preferable to digitalis whenever cardiac insufficiency is associated with the loss of myocardial tone; digitalis has very little influence on myocardial tonus.

Ouabain does not and cannot take the place of digitalis. The two drugs have essentially different actions. Digitalis, by its moderating action on the excitability and conductibility of the heart, regulates cardiac rhythm; whereas ouabain improves myocardial tonus. From this point of view, ouabain supplements the action of digitalis, the two substances constituting, by their judicious successive employment, a particularly valuable therapeutic complex. Some clinicians assert that they can very well be administered at the same time.

Calcium-Plus Diet in the Management of Hypertension

From the study of 55 patients with hypertension (only 32 of which were under observation long enough to make tentative classification possible), Dr. N. S. Davis, III, of Chicago, summarizes his conclusions as follows:

1.—Calcium lactate, 8 Gm. in water, half an hour before meals, plus a low-salt, low-maintenance protein diet, with most of the protein from milk, moderate in total amount but adequate in all respects, causes considerable sub-

jective improvement in patients with hypertension, but objectively is of little value.

2.—It seems that hypertension, like fever, may be intermittent, remittent, continuous or pernicious.

3.—It seems that, like fever, hypertension may be a symptom of several diseases or pathologic conditions for which there may be various causes.

4.—It seems that, just as our forefathers sought antipyretics to lower fever without considering the disease of which it was a symptom, we are seeking depressor substances to lower the blood pressure instead of concentrating on the description of the diseases of which hypertension is a symptom and their differentiation.

5.—No cure for hypertension will be found until we are able to recognize the conditions of which it is a symptom.

6.—The value of any therapeutic agent in the treatment of hypertension cannot be determined in a few days or weeks, but only after months or years of trial.

Influence of Vaccination with Hemolytic Streptococci on Children with Rheumatic Fever

In *Am. J. Dis. Child.*, July 1931, Drs. May G. Wilson and H. F. Swift, of New York, report that about one-half of a group of 172 children with recurring seasonal rheumatic activity received intravenous vaccination with hemolytic streptococcic vaccine. The vaccine consisted of a heat-killed culture of hemolytic streptococcus, suspended in 0.5 percent phenolized physiologic solution of sodium chloride so that 1 cc. represented the required dose The first injection consisted of 250,000 microorganisms and each subsequent weekly injection contained double that of the preceding one, until the maximum of 10,000,000 was reached. Nine (9) to 12 injections were given..

The vaccinated and unvaccinated groups were under observation for 2 years. The yearly incidence or recurrence in the treated group was less than in the control group; 45 percent of the treated children as compared with 18 percent of the controls were free from recurrence for periods of from 16 months to 2 years after treatment.

Results of Tonsillectomy and Adenoidectomy

An intensive evaluation of the results of tonsillectomy and adenoidectomy, in a small group of children operated upon, has been made by Drs. T. K. Selkirk and A. G. Mitchell, of Cincinnati, and the findings compared with other studies of a similar kind reported in the literature.

In *Am. J. Dis. Child.*, July, 1931, these authors say that, on their study of children three years after tonsillectomy and adenoidotomy, there was a lessened incidence of colds, nasal obstruction and sore throat, while sinus infection, headache and "growing pains" were increased in frequency.

As a criticism of their personal study and that of many others, they note certain modifying factors to which no attention or too little attention is paid. These are: age, sex, race, heredity, financial class, season, effect of adenoidotomy alone, length of observation after operation, source from which the history and other data are obtained, incidence of tonsillectomy in the community at large and the suitability of the control group. The neglect of a consideration of these factors often invalidated the conclusions.

There are several methods of approach in the evaluation of results, the method of choice varying with the symptom studied. The method of studying a large number of symptoms and pathologic conditions simultaneously usually results in superficiality. Separate and intensive studies of a single symptom in relation to tonsillectomy have been made mainly on the rheumatic syndrome and probably offer the best means of approach in studying other symptoms.

Many of the symptoms and conditions popularly supposed to be associated etiologically with diseased tonsils are those in which the natural course and incidence, regardless of the effect of tonsillectomy, are not known. Many of them, too, are affected by other factors than tonsillectomy in an as-yet-unknown manner. It would seem that the conclusions drawn from some of the studies which are widely quoted as showing the effects of tonsillectomy are decidedly open to question, because of failure to consider other factors in evaluating the results.

The Role of Humoral Elements in Immunity

Dr. John A. Kolmer, of Philadelphia, in *J.A.M.A.*, Oct. 24, 1931, points out that antibody reactions in the test tube bear no essential relation to defensive antibodies or hormones in the prophylaxis and treatment of disease.

Immediate Treatment of Severe Head Injuries

In the present state of our knowledge, the treatment of head injuries involving the brain is more a medical than a surgical problem. The newer treatment deals chiefly with the handling of the excessive cerebrospinal fluid that accumulates in and about the brain following injury.

In *Med. Arts*, Sept., 1931, Dr. J. W. Reed, of Indianapolis, outlines the immediate treatment of head injuries involving the brain as follows: Put the patient in the nearest available bed and keep him there until shock has subsided; do not give morphine (which increases intracranial pressure), but administer codeine rectally; do not suture scalp wounds or make radiographs while the patient is in shock; stop active bleeding from wounds by ligature, etc.; reduction of cerebral edema is best accomplished by the intravenous injection of 50 cc. of 50-percent dextrose solution, repeated every 4 to 6 hours until patient shows signs of mental clearing. The next step is lumbar puncture, which should be done in all head injuries accompanied by unconsciousness. The spinal puncture should be done as soon as the dextrose has been given and a spinal mano-

meter should always be used. Reduce fluid intake to a minimum; no fluid should be given during the first 24 hours, and for several months it should be limited to 36 to 40 ounces a day, to guard against "delayed edema."

The surgical treatment of fractured skull is secondary to treatment of brain injury and should follow the indications. Where there is no fracture, decompression operations do not appear to be advisable.

Ethyl Chloride as an Anesthetic

According to Dr. H. J. Shields, of Toronto, in *Anesth. & Analg.*, July-Aug., 1931, ethyl chloride is not a suitable anesthetic for the excessively stimulated or the extremely apathetic patient; it should not be used in the presence of respiratory obstruction of any character; it is contra-indicated for very painful surgical procedures; its real danger is partly due to its toxicity, but more particularly to its extreme volatility, which readily permits of overdosage, and its quick action, which necessitates constant and close attenton for untoward signs; and, finally, for the average individual, when given with reasonable precautions, it may be considered a safe anesthetic.

Ethyl chloride is an anesthetic with very definite limitations. When, however, its advantages over other anesthetics may be made use of without, at the same time, experiencing its disadvantages, it is a useful anesthetic with a definite place in anesthesia.

Vitamin Content of Grapes and Grape Juice

Grapes of two varieties—Thompson seedless and Malaga—are a fair source of vitamin A, the vitamin that prevents infections of the eye, the lining of the nasal passages and the mucous glands, and of vitamin B, which prevents beriberi and stimulates the appetite, according to preliminary tests recently concluded in the Bureau of Home Economics. Not enough vitamin C was present to completely protect the experimental guinea-pigs against scurvy.

Grape juice of two brands tested at the same time gave no evidence of the presence of vitamin A. One contained a small quantity of vitmin B; the other did not contain a measureable quantity of this vitamin. Neither juice contaned enough vitamin C to protect guinea-pigs against scurvy.

These tests were made by Esther P. Daniel, in the division of nutrition investigations, Bureau of Home Economics, using a new assay method on which little published information is available.—*Official Record*, U. S. Dept. of Agriculture, April, 25, 1931.

Prophylaxis of Ringworm of the Feet

In recent years there has been a great increase in the incidence of ringworm of the feet, especially among those using common dressing rooms, shower baths, gymnasium floors, etc.

In *J.A.M.A.*, Aug. 15, 1931, Drs. E. D. Osborne and B. S. Hitchcock, of Buffalo, report that in experiments performed by them they found that a solution of 0.5 percent sodium hypochlorite should kill all the common fungi found in ringworm of the feet with exposure of 15 seconds to these organisms in a watery suspension.

Tests of prophylaxis using sodium hypochlorite solution (1 percent) have been made in the Buffalo High Schools. The most satisfactory method has been found to be the building of a "well" in the tile floor the entire width of the corridor through which the pupils passed from the dressing room to the showers, swimming pool and gymnasium. They also passed through the well (which was filled with the sodium hypochlorite solution) on their return to the dressing rooms.

The result has been that, while formerly ringworm of the feet was quite common among the students, not a single case has developed during the 9 months following installation of the prophylactic hypochlorite "well".

The Recognition of Mastoiditis

The symptoms of mastoiditis as described in textbooks are misleading. According to Dr. H. N. Barnett, in *Practitioner*, Aug., 1931, the impression created in the mind of the general practitioner is that the outstanding feature of acute mastoiditis is a more or less large swelling behind the ear, which pushes the ear forward so that it is much more prominent than its fellow. Such a condition should never be seen (with the possible exception of a case due to a fulminating type of influenzal infection, which occasionally produces such symptoms in twenty-four hours), any more than an appendiceal abscess is expected to be seen before a diagnosis of appendicitis is made.

It is sufficient that there should be pain with tenderness on pressure over the antrum or tip cell, combined with a discharge too profuse to come from the cavity of the tympanum, and therefore coming from the mastoid area, and varying in character according to the time it has been present. Some consideration also should be given to the constitutional reaction, as there may be considerable rise of temperature with malaise, but it cannot be emphasized too much that an acute mastoiditis with considerable destruction of bone may be present with little or no constitutional symptoms.

The General Practitioner

One of the greatest rewards of being a general practitioner is his freedom from the temptation to confine his studies and thoughts to one special subject. He never has the misfortune to catch up with any part of his horizon.—Dr. Emmet Keating.

NEW · BOOKS

Modern life presents so great a number of distractions, that many fail to make full use of books in the solution of their problems.—DR. KEITH F. ROGERS.

Wolfe: How to be Happy

HOW TO BE HAPPY THOUGH HUMAN. *By W. Béran Wolfe, M.D. New York: Farrar & Rinehart, Inc.* 1931. *Price* $3.50.

Since Freud propounded his sexual theory of psychic obliquities, psychoanalysis has been eagerly devoured by laymen, especially those with a fondness for the prurient. But the fact remains that it was Freud who inaugurated the popularity of the study of man's superphysical equipment.

Within the past few years a considerable number of books on the mechanism and functions of the human psychic faculties have appeared, of which this volume is one of the best. Most of these books are more or less heavily padded, but Dr. Wolfe's contribution is less guilty along that line than a number of the others, although he has the rather common tendency to speak dogmatically about some matters, indirectly connected with his main subject, which he does not thoroughly understand.

The writing is clear and clever, nearly half of the pages presenting phrases or paragraphs that stick in the memory; and where his information is ample, as it is along most lines, his ideas and exposition of them are clear and to the point. His methods of building up his theses and illustrating some of his points with diagrams is excellent.

Wolfe is an earnest and convinced follower of Adler, and this fact appears frequently in his pages. His chapters on the inferiority complex and its normal and pathologic compensation are clarifying and helpful; while his analogy of life as a three-ring circus (the main business), with side-shows (the neuroses), presents these matters in a new light which brings out their relationships and practical connotations in a satisfying manner. The fine chapters on "Love and Marriage" and "The Triumph of Maturity" make a fitting and practically useful climax to a worth-while piece of work—a "study in the fine art of being human"—a "Baedeker of the soul."

This is a book for general practitioners of Medicine, who have given little attention to psychiatry, and rather highly cultured laymen—college people—who are seeking suggestions as to how to make their lives more fruitful and joyous, but have found no adviser to help them by word of mouth. The ordinary, everyday lay reader would find most of it over his head; but for those who are able to assimilate it, it will prove intensely interesting and decidedly helpful.

Sanger: Slavery of Women

MOTHERHOOD IN BONDAGE. *By Margaret Sanger. New York: Brentano's.* 1928. *Price* $3.00.

There has been much hue and cry rather recently about child marriage and the enslavement of women in India and China. It may come as rather a shock to some of the self-satisfied outcriers to find that these things are distressingly common right here in the United States.

It is always charitable, when one finds a man opposed to activities which will make for the progress and welfare of humanity, to assume that he is ignorant of the facts. That is the way we must look upon the distressing timidity, or even the open opposition, which too many physicians still manifest when dealing with the question of birth control.

Let anyone who is in doubt about the pressing need for an enlightened and humanitarian method of dealing with this question read the pitiful, heart-breaking letters from enslaved mothers, taken from among thousands of similar epistles in her personal correspondence, which Mrs. Sanger has collected in this volume, and then see if he can sit back in pusillanimous complacency and permit earnest, sincere, well-meaning women to live in hell, when it is in his power to rescue them. Again and again occurs the statement, "I went to my doctor, but he would tell me nothing."

This is a book of *cases*, with just enough explanatory matters to show the logic and purpose of their selection and publication. Every physician who is in doubt about the righteousness of contraception or its hygienic, prophylactic, economic or sociologic values, should read these letters from beginning to end. He can then confer a favor upon the suffering ones by loaning it to a few of the sour and sex-starved spinsters and the eunuchoid or jack-rabbit deacons, who can be found in any community, in the hope that it may crack the shells of their smugness and enlist their assistance in the campaign for civilized laws on this subject in the United States.

Berkeley: Midwifery

MIDWIFERY. *By Ten Teachers. Under the Direction of Comyns Berkeley, M.A., M.D., M.C. (Cantab.), F.R.C.P. (Lond.), F.R.C.S. (Eng.), F.C.O.G. Edited by Comyns Berkeley, J. S. Fairbairn and Clifford White. Fourth Edition. New York: William Wood and Company.* 1931. *Price* $7.50.

This textbook of midwifery has been written by ten leading English teachers of the subject and is a companion volume to a similar work on gynecology which was noticed in CLINICAL MEDICINE AND SURGERY, Sept., 1930, p. 719.

The work, now in its fourth edition, is a compilation intended for students preparing for examination, although it should be found valuable also to practitioners. There are three main divisions: Pregnancy; labor and the puerperium; two smaller sections deal with the newborn child and the relief of suffering in obstetric practice.

The revisions of the present edition include the newest views of toxemias of pregnancy, puerperal sepsis, anesthesia in labor and blood transfusions.

The volume fulfils its purpose as a complete handbook for the student of obstetrics, especially as regards English practice.

Smith & Feiling: Modern Medical Treatment

MODERN MEDICAL TREATMENT. *By E. Bellingham-Smith, M.D., F.R.C.P. Lond., Physician and Lecturer on Medicine, St. George's Hospital; Senior Physician to the Queen's Hospital for Children; etc. and Anthony Feiling, M.D. Camb., F.R.C.P., Lond., Physician, Lecturer on Medicine and Dean of the Medical School, St. George's Hospital; etc. With an Introduction by Sir Humphry Rolleston, Bart., G.C.V.O., K.C.B. In Two Volumes. New York: William Wood and Company.* 1931. *Price* $12.00 *for the 2 volumes.*

The authors are no doubt right when they say that the complexities of modern diagnostic methods and the demands for pathologic investigations tend to lessen a practitioner's interest in therapeutics.

Therapeutics is presented in this work from the aspect of the disease concerned, and not from that of the remedy employed. Etiology, symptoms and prognosis are considered only insofar as they affect therapeutics.

The authors' personal experience has been the foundation of their recommendations in regard to treatment. Treatments, the value of which they consider still problematical, are not recommended; many excellent drugs, elaborated under the strictest modern scientific pharmacologic methods and biologically tested and standardized, as well as clinically proved, are not mentioned. This remark applies also to certain physical therapy methods of treatment. It may, indeed, be said that, throughout, the authors lean, perhaps, too much toward conservatism and the use of older drugs which, though proved good by experience, are not more so or are eclipsed by the results of more recent scientific research.

Vol. I covers the diseases of the nervous, vascular, glandular, respiratory and urinary systems; Vol. II deals with diseases of the alimentary tract, the metabolic system, the joints and muscles, and with infections.

On the whole, the subject of practical therapeutics is presented by the authors in a sound, conservative and cautious way and the student will find the work a good and prudent one to follow, if he keeps in touch with what else of value may be available.

Medical Clinics of North America

MEDICAL CLINICS OF NORTH AMERICA. *Chicago Number. Volume 15, Number 3, November,* 1931. *Philadelphia and London: W. B. Saunders Company. Issued serially one number every other month. Per Clinic year, July,* 1931 *to May,* 1932. *Price, Paper,* $12.00; *Cloth* $16.00.

The Chicago Number, Nov., 1931, of the Medical Clinics of North America, opens with an excellent paper by Drs. A. R. Elliott and R. H. Young, on Myelogenous Leukemia, especially its treatment by irradiation. Dr. C. W. Finnerud contributes a well-illustrated paper on the Cutaneous Manfestations of Acquired Syphilis. Other noteworthy articles are those of Dr. R. W. Keeton, "Some Things Every Physician Should Know About Diabetes"; "Ulcers of the Stomach and Duodenum," by Dr. S. A. Portis; "Heart Disease and Pulmonary Pathology," by Dr. C. J. McMullen; and "Polyarthritis Complicating Tonsilitis Due to Hemolytic Streptococci," by Dr. I. Pilot.

There are, altogether, 20 papers.

Gallaudet: Planes of Fascia

A DESCRIPTION OF THE PLANES OF FASCIA OF THE HUMAN BODY; With Special Reference to the Fascia of the Abdomen, Pelvis and Perineum. *By B. B. Gallaudet, Department of Anatomy, College of Physicians and Surgeons, Columbia University, New York. New York: Columbia University Press.* 1931. *Price* $2.00.

In the author's opinion the fascial planes (or fasciae) of the abdomen, pelvis and perineum are inadequately described in standard textbooks of anatomy. He rectifies the defective description in this short book. His work is based on the actual dissection of 34 adult human bodies and such other information as was found applicable. He shows that the planes of fascia constitute a continuous investiture of the entire body.

This book should be of value to anatomists and to surgeons.

Stryker: Courts and Doctors

COURTS AND DOCTORS. *By Lloyd Paul Stryker. New York: The Macmillan Company.* 1932. *Price* $2.00.

It appears to be a fact that in recent years the number of suits for malpractice against physicians is increasing. Every practitioner should, therefore, be acquainted with the broad principles of the law, so far as it relates to medical practice.

The author, who is a well known medical jurist of the State of New York and experienced in the conduct of medical malpractice suits, as well as in other phases of legal procedure in which the doctor may figure, puts in this book the results of his experiences and his researches in the law connected with this sub-

ject; this includes the relationship of physician and patient, actions for malpractice, expert testimony and the doctor in criminal law. Apropos cases are cited throughout the book.

The work is one which a doctor who has not a similar one might with profit place upon his desk or bookshelf, and the advice given will often be instrumental in protecting him against unwarranted attacks in his professional capacity. The language is simple and clear and free from legal technicalities.

Gardner: Microbes and Ultramicrobes

MICROBES AND ULTRAMICROBES; An Account Of Bacteria, Viruses and The Bacteriophage. *By A. D. Gardner, M.A., D.M., F.R.C.S., Fellow of University College, Oxford. With An Appendix By G. R. de Beer, M.A., B.Sc. With 21 Illustrations. New York: The Dial Press, Lincoln Mac Veagh.* 1931. *Price* $1.50.

The object of this little book is to provide workers and students of biology with an adequate account of the ultramicroscopic agents of disease and of transmissible bacterial lysis—viruses and the bacteriophage—which the author classes together under the term "ultramicrobes."

There are three parts: Part I deals with bacteria and their variation; Part II with the viruses; and Part III with the bacteriophage.

While there is nothing new put forward, those who wish to obtain a clear mental picture of these biologic entities and the part they play, especially in disease, will get it here; and they will thus be better able to follow the current literature, in which the various ultramicroscopic agents play an important part.

Rudolph Matas Birthday Volume

THE AMERICAN JOURNAL OF SURGERY, MATAS BIRTHDAY VOLUME. *A Collection Of Surgical Essays Written In Honor Of Rudolph Matas, New Orleans, With Portrait. New York: Paul B. Hoeber, Inc. October,* 1931, *Volume XIV, Number* 1.

The entire October, 1931, issue of the *American Journal of Surgery* is devoted to contributions by the pupils and friends of Dr. Rudolph Matas, of New Orleans, in honor of his seventieth birthday. The number makes a volume of nearly 400 pages and it is to be reissued in proper book form, the edition being limited to 1,000 copies.

Of the total 21 contributions, several are by foreign surgeons. These and many of the American papers deal with vascular surgery and the other special fields in surgery and medicine with which Dr. Matas' name has become specially indentified.

Dr. R. Leriche, of Strasbourg, writes on arterectomy for localized arterial obliterations; Dr. R. Alessandri, of Rome, furnishes a short paper on sympathectomy for Raynaud's disease and thromboangiitic gangrene; Dr. J. C. Bloodgood, Baltimore, writes a fine paper reminiscent of Halsted's surgical triumphs at the John Hopkins Hospital during the closing quarter of the last century; Dr. R. C. Coffey, of Portland, Ore., contributes on cancer of the rectum and sigmoid.

Other notable surgical essays are from the pens of Dr. Ribas y Ribas, of Barcelona: the late Dr. J. B. Deaver; Dr. G. W. Crile, of Cleveland; Dr. Paul Moure, of Paris; Dr. W. J. Mayo, of Rochester, Minn.; Dr. H. Lilienthal, of New York; Dr. E. A. Graham, of St. Louis; etc.

All the contributions are of high order. The printing and general set up of the volume leaves nothing to be desired and on the whole it forms a very worthy appreciation of the conspicuous services of the distinguished surgeon in whose honor it has been written. Surgeons who like to possess an excellent specimen of literary and professional craftmanship as well as of fine bookwork would do well to secure a copy of the limited edition.

Andrews: Blood Pressure

HOW'S YOUR BLOOD PRESSURE? *By Clarence L. Andrews, M.D., Attending Physician and Medical Chief at the Atlantic City Hospital. New York: The Macmillan Company.* 1931. *Price* $2.50.

As the author states, this book is written for those who are concerned about their blood pressure—the victims of blood pressure psychology.

Being addressed to the layman, the book is necessarily written in the simplest language and deals with the most elementary problems regarding the heart and the circulation, as well as the systemic conditions that affect both.

In the 14 chapters comprised in the work, the facts are explained regarding the mechanism of the circulation, normal, high and low systolic and diastolic pressures, with the effects of food and nervous strain.

The final chapter deals with some fundamental causes and the measures which may be taken to control abnormal blood pressure.

So many people are heart-conscious and have very erroneous ideas concerning blood pressure and its effects, that physicians will find here a good, simple description, written by a doctor of experience, which his patients might read with profit, and which will help to keep them physically fit in this and other regards.

Pusey: An Oldtime Doctor

A DOCTOR OF THE 1870's AND 80's. *By William Allen Pusey, Sometime President of the American Medical Association and of the American Dermatological Association. Springfield and Baltimore: Charles C. Thomas, Publisher.* 1932. *Price* $3.00.

Much has been written in medical journals and elsewhere about the old-fashioned country doctor; he has been written of in a glamorous way and made a picturesque and romantic figure, rather than one of actuality; fiction has surrounded him with a halo, at the expense of accuracy.

In this little book Dr. Pusey tells the main incidents of the life of his father, who was a country practitioner in Kentucky in the 1870's and 80's. Dr. Pusey's pen pictures are clear, not overdrawn and have the air of presenting

a truthful likeness of the real country doctor, unprejudiced by the natural sympathetic attitude suggested by blood relationship and filial affection. These pictures, ungarnished by sentimentality, bring out the real status of the country doctor at a period when the practice of Medicine in America was in a state of flux —a period when amputations and operations for strangulated hernia were still done on kitchen tables, when chloroform was always the anesthetic, and when saddle bags were always filled and ready.

Every practitioner of medicine should read this little volume with pleasure, interest and profit. Somehow its perusual gives the idea that everything in medical practice that is new is not an advance and that a good deal of humanity has departed out of the practice of medicine with the departure of what, rather derogatorily, has been termed the old-fashioned practitioner.

The book is beautifully printed and tastefully bound.

Rogers: Advice to Young Men

A Doctor's Advice to His Son. A Discussion of the Problems Peculiar to Youths and Men with a Presentation of the Established Scientific Facts Underlying These Problems. By *Keith F. Rogers, M.D., C.M., Major (Res.) Canadian Army Medical Corps; Medical Officer of Health, Tecumseh Township. Toronto: The Ryerson Press. Price* $1.00.

When fathers are lacking in intelligent insight into the lives and problems of their sons (as they too often are), young men frequently turn to their family physicians for counsel. We must not fail them.

The author of this little book is a physician who has sensed the more important of these problems and has set forth, in clear, straightforward and dignified words, some of the solutions which racial experience has proved to be adequate. His facts are well grounded and are not confused (as they often are in similar books) by maudlin sentimentality.

The matters dealt with include the sex life (including venereal diseases), importance of money and financial dealings, university life and the problems of marriage.

Here is a good book to place in the hands of any young man who seeks advice as to the conduct of his life, or of any father who goes to his doctor with the question, "What shall I tell my boy?"

Gardiner: Skin Diseases

Handbook of Skin Diseases. By *Frederick Gardiner, M.D., B.Sc. (Public Health), F.R.C.S.E., F.R.S.E., Lecturer on Skin Diseases, University of Edinburgh, Physician for Diseases of the Skin, Royal Infirmary, Edinburgh. Third Edition. New York: William Wood & Co. Edinburgh: E. & S. Livingstone.* 1931. *Price* $3.50.

This short treatise is a practical guide for general practitioners and students for the recognition and treatment of the commoner skin diseases according to modern conceptions, which recognize most of these as cutaneous manifestations of systemic derangements. The many excellent colored and black and white illustrations will help in the recognition of particular lesions, and the treatments recommended are simple and such as have been proved by experience to be satisfactory.

Sinai: Medical Facilities of San Joaquin County

A Survey of the Medical Facilities of San Joaquin County, California, 1929. By *Nathan Sinai, D.P.H. Statistical Analysis and Presentation By Maurice Leven, Ph.D. Publications Of The Committee On The Costs of Medical Care: No. 12. Chicago: The University of Chicago Press.* 1931. *Price* $10.00.

This is one of the studies of the Committee on the Costs of Medical Care, Washington, D.C.

The survey here presented is very complete and shows the most important economic facts regarding the medical needs and services of a comparatively small, self-contained, intelligent and relatively prosperous community in the extreme western part of the United States. Also the Public Health Service has a fairly free hand here.

It is interesting to know that the major part of the total expenditure on health services goes to regular physicians and dentists. Osteopaths *et alia* collect only a small percentage. Also people of small income, even in the face of good, practically-free hospital facilities, seem to prefer patronizing private or pay hospitals.

A number of other matters, in this medical cross-section of a county, will be of interest to students of social economics, as well as to these members of the profession in general who are interested in the costs of medical care and their distribution.

Surgical Clinics of North America

The Surgical Clinics of North America. *Philadelphia Number. Volume 11, Number 6, December,* 1931. *Index Number. Philadelphia and London: W. B. Saunders Company.* 1931. *Issued serially, one number every other month. Per Clinic year, February,* 1931 *to December,* 1931: *Paper* $12.00; *Cloth* $16.00.

The December, 1931, number of the Surgical Clinics of North America is devoted to contributions from Philadelphia clinics. The opening paper, by Drs. Chevalier Jackson and W. Wayne Babcock, on laryngectomy for cancer of the larynx, shows that there is a much better prognosis now than hitherto in this affection, when locally confined.

One of the best and most practical papers in this issue is that by Dr. Temple Fay on "Clinical Considerations Surrounding Head Fractures." Dr. Fay departs boldly from many of the cherished orthodox methods in dealing with these injuries.

The paper, by Drs. E. L. Eliason and W. W. Ebeling, on the "Modern Treatment of Fractures" is also worth while and there is a good paper by Dr. E. L. Eliason and V. W. Murray Wright on the "Treatment of Diabetic Gangrene."

Other papers which will appeal to general practitioners are: "Herniorraphy" by Drs. W. E. Lee and T. McK. Downs; "Hemarthrosis and Hydrarthrosis of the Knee Joint," by Dr. H. R. Owen; "Intra-abdominal Cysts" by Dr. W. B. Swarthly; and "Congenital Hemolytic Jaundice," by Dr. A. A. Walking.

Altogether there are 35 clinical contributions to this issue.

Dodd: Autobiography of a Surgeon

AUTOBIOGRAPHY OF A SURGEON. *By John Morris Dodd, M.D., F.A.C.S., D.Sc. New York: Walter Neale.* 1928. *Price* $5.00.

The most interesting parts of Dr. Dodd's reminiscences are those which deal with the incidents of life in the out-of-the-way community in which he spent his earlier years. Such material is always of value to the historian and sociologist, especially when presented by one who has lived through them. Dr. Dodd writes of the rural life in his boyhood in a natural and, on that account, very fascinating way.

There is but little of note in the book from the purely medical aspect. Dr. Dodd's vicissitudes may be said to be those experienced by ninety percent of the medical practitioners of today who are sexagenarians. Of course they are interesting, especially to those who have gone through the mill.

The second part of the book is a collection of personal medical essays and observations which, except as personal opinions, have little to do with an autobiography proper.

Margolis: Conquering Arthritis

CONQUERING ARTHRITIS. *By H. M. Margolis, M.D. New York: Macmillan Company.* 1931. *Price* $2.00.

Owing principally to the indefiniteness of knowledge regarding exact etiology, the treatment of arthritis and chronic rheumatic disease is frequently unsatisfactory and disheartening, both to physician and patient.

The aim of Dr. Margolis' book, written primarily for the arthritic patient, is to acquaint him with those facts bearing on the problems that face him.

To the patient with arthritis who seeks a guide to self treatment, the knowledge given here will offer little reward. But it is a necessary adjunct for the patient's cooperation with the physician's management of the case and to the armamentarium for combating the disease. It should do much to relieve the mind of the patient who has become discouraged, owing to the duration of treatment, urge him to continue the care of a reputable physician and remove the fear of being crippled.

The book may therefore be recommended by physicians for the perusal of their arthritic patients and there is much in it that will appeal to physicians themselves. The style is clear and simple and the subject matter can easily be followed by any intelligent layman.

Weidlein and Hamor: Science in Action

SCIENCE IN ACTION; A Sketch Of The Value Of Scientific Research in American Industries. *By Edward R. Weidlein and William A. Hamor, Mellon Institute of Industrial Research, Pittsburgh, Pa. New York and London: McGraw-Hill Book Company, Inc.* 1931. *Price* $3.00.

The nucleus of this book consists of lectures delivered at various times during the past 15 years to groups of business men by the authors.

In a readable and interesting way, a sketch story of the growth of industrial research in the United States is told; the most prominent laboratories and workers of applied science, their methods and results are described. Most large industrial concerns are now equipped with such laboratories.

From a philosophic standpoint the intelligent reader can deduce for himself the influence of industrial progress on the national character. The evolution and status of industrial research and its repercussion in affecting the lives and fortunes of the people forming a part of an industrial age are not so much the subject of the book as descriptions of the material progress rendered by the vast projects which have been made possible by the applications of scientifically worked out processes in almost every line of human endeavor.

There are six parts each dealing with the development of scientific research, generally research applied to particular problems in laboratories, and their applications in various lines of human endeavor, not alone in manufacturing and the handling of raw materials and wastes, but in the management of the most difficult problem, the handling of human help.

Part II, which deals with science and human welfare, will be the most interesting to the medical profession, but although the matters here dealt will hold the lay reader they are generally familiar to medical men.

Although only an outline, the volume will give a very fair idea of industrial methods told in non-technical language.

Fischer: Mucous Membranes in Vasoneurotic Diatheses

DIE SCHLEIMHAUTE BEI DER VASONEUROTISCHEN DIATHESE. *Von Rudolph Fischer, Dr. Med., Privatdozenn für Innere Medizin an der Universität Tübingen. Mit Einem Nachwort von Otfried Müller, Ordentl. Professor, Dr. Med., Vorstand der Medizinischen Klinik Tübingen. Mit 83 Abbildungen und 1 Farbigen Tafel. Stuttgart: Ferdinand Enke, Verlag. Price RM* 10.—.

This monograph deals with the gross and microscopic anatomy of the mucous membranes (especially of the digestive tract) in various groups of vasoneuroses. The vascular changes observed in patients with a vasoneurotic diathesis are well illustrated, in black and colors, and diagnostic suggestions are given on this basis.

MEDICAL · NEWS

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Europe's First Woman Coroner

Frau von Martels, whose attractive picture we show you here, has recently been appointed to preside over an important coroner's court in Berlin, Germany—the first woman to hold such a position in Europe.

Stomatologists to Meet

The ninth anniversary of the stomatologic movement in America will be celebrated at the meeting of the American Society of Stomatologists at the Hotel McAlpin, New York City, April 28 and 29, 1932. Papers and clinics will be presented. All practitioners of dentistry and medicine are invited.

Details of this meeting may be obtained from Dr. Alfred J. Asgis, 243 W. 70th St., New York, N. Y.

The Index for 1931

Every physician who receives CLINICAL MEDICINE AND SURGERY regularly should have every volume bound, *with the index*, otherwise he is throwing into the trash can material which would be worth many hard dollars to him, if placed on his library shelves and *used every day*. The material we print *does not grow old*.

The index for the 1931 volume will soon be ready, and it will be a *real* one, as usual. If you want it, just write, "Send the 1931 Index," on a post-card, with your name and address. There is no charge, though it costs us plenty. Just another piece of C. M. and S. service.

If there is no book-binder handy, we will have it done for you. Write for particulars, or look them up in the February, 1931 issue, Page 90.

Opening in Michigan

It has come to our attention that the practice of the late Dr. E. F. Holcomb, at Farmington, Michigan, is for sale. Anyone interested should communicate with Mrs. Holcomb at the address given.

Gorgas Essay Contest

The fourth annual health essay contest for high school juniors and seniors, sponsored by the Gorgas Memorial Institute, will be open from Feb. 7 to Mar. 15. The subject is, "Mosquitoes: Their Danger as a Menace to Health and the Importance of Their Control."

High school winners will receive a medal and qualify for the state contest. State winners will receive $10 and qualify for the national contest. The national prizes are: first, $500 in cash and $200 for a trip to Washington, D. C., for the award; second, $150; third, $50.

For detailed announcement, write to the Gorgas Memorial Institute, 1331 G. St., N. W., Washington, D. C.

Pass this news on to your youngsters. The children of physicians ought to win these prizes.

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Back to the Barter and Trade

Money must be pretty scarce down in Georgia when a dentist goes to the trouble of informing the community in this ostentatious manner that he will take in return for his dental work any kind of country produce, or anything of value, for his "painless art."

American Public Health Association

This year (1932) will witness the 200th anniversary of George Washington's birth, and many societies, among them the American Public Health Association, will hold their meetings in our Nation's Capital. The A.P.H.A. meetings bring together experts from all over this and other countries and are of great interest to health officers, nurses, food and nutrition experts, sanitary engineers, school physicians, directors of hospitals and specialists in all branches of public health work. This year's meeting will be from October 24 to 27, inclusive.

Additional information can be obtained by writing to the A.P.H.A., 450 Seventh Ave., New York City.

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Broadcasting Heartbeats

A Los Angeles cardiologist, Dr. Royal Crist (at the left) and a radio technician, Jack Cheney (right) have devised an apparatus which greatly facilitates the study of the heart sounds. The large stethoscope is hooked in with a power amplifier through a very delicate microphone, so that the sounds from the heart are increased to such volume that they can be heard by a whole roomful of people.

Crystalline Vitamin D

A crystalline material, **Calciferol,** having the empiric formula of ergosterol, has been secured from irradiated ergosterol by English biochemists. One milligram of the substance exhibits an antirachitic potency of approximately 40,000 international vitamin D units. — Editorial, *J.A.M.A.*, Nov. 28, 1931.

Butter as a Factor in Infantile Paralysis

Drs. Levaditi, Kling and Lépine have reported to the Academy of Medicine, of Paris, that butter is one of the best vehicles for the holding and transmission of the virus of infantile paralysis. The virus is preserved for more than 90 days in butter at low temperatures.—*Le Siècle Méd.*, Paris, Nov. 1, 1931.

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